THE BOOK OF SWIMMING & DIVING

SID. G. HEDGES

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THE BOOK OF SWIMMING
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Author of

"The Boys' Book of Swimming"
"The Girls' Book of Swimming"
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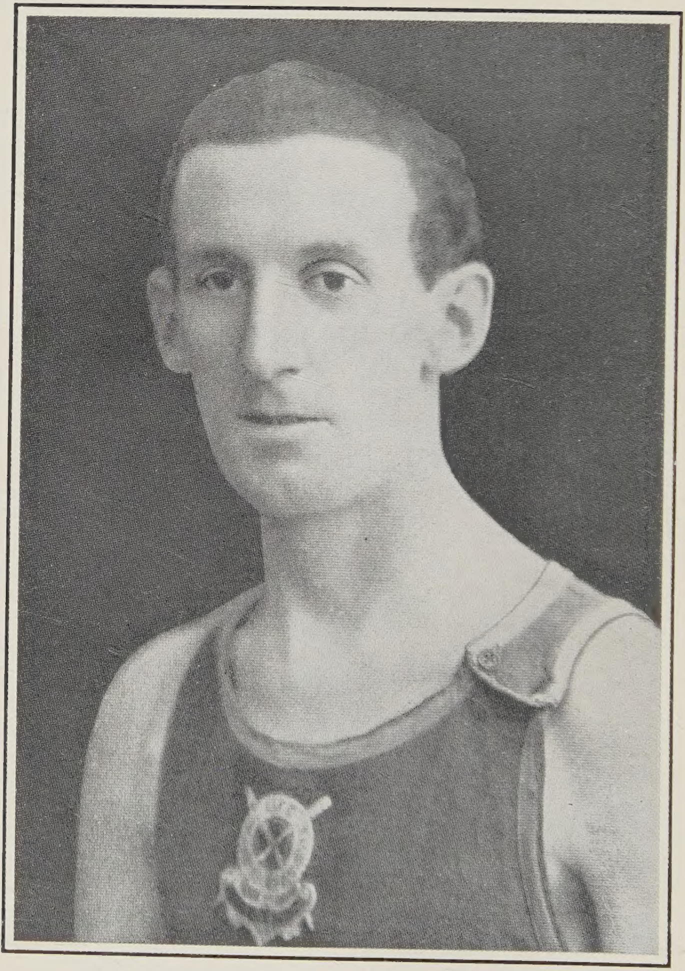

SID G. HEDGES

Frontispiece

THE
BOOK OF SWIMMING AND DIVING

by
SID G. HEDGES

Illustrated by
ARTHUR DIXON

(1929)✓

6th Thousand

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555

Dedicated to my Father,
G. W. HEDGES
who took me for my first bathe

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FOREWORD

THERE seems to be need for an up-to-date and comprehensive book on swimming and diving. I have, in my "Boys'" and "Girls'" Books (Brown, Son & Ferguson, Glasgow) tried to meet the requirements for juvenile bathers, and here is a volume of wide scope more particularly for swimmers who are grown-ups and grown-ups who would be swimmers.

The history of swimming and swimming organizations is not dealt with here, nor is this book written especially for the use of swimming instructors—such things have been excellently done already by Messrs. Henry, Sinclair, Thomas, and Austin, to whom I owe much. I am indebted to the Royal Life-Saving Society for permission to describe their methods, and to the editor of "Chamber's Journal" in whose pages part of the section on "Sea Bathing" first appeared.

But, besides being fairly comprehensive, this volume includes many original features. The strokes are clearly classified ; there are new fancy swimming feats ; there is a larger collection of swimming games than has been brought together before ; a completely original series of land drills have been included, and, finally, there is a chapter entitled "A Course of Swimming", which plans in detail the first season's work for any bather. Diving also has considerable space—plain, fancy, and combination dives being described.

In short, the would-be swimmer will here find such guidance as will assist him or her to become an all-round expert, and, I hope, a keen lover of the finest of all sports—swimming.

And since Channel swimming is becoming now so popular, may this book chance to help some future record-breaker !

SID G. HEDGES.

BICESTER, OXON.
1927.

THE BOOK OF SWIMMING AND DIVING

Bathing and Swimming

To float on the water with perfect ease;
Go racing along like a yacht in the breeze,
And feel sheer delight in the buffeting seas—
'Tis glorious to be a swimmer!
("The Delights of Swimming," Sid G. Hedges.)

SWIMMING is more popular than ever before—and rightly so, for it is one of the most enjoyable things permitted to mortals.

It is the exercise for every age. Though one had best learn when young, yet advanced age need not deter the would-be swimmer, and the adult can start as easily as the child. The learning need not be a solemn, strenuous study—it should be part of the whole joyous game of bathing.

There is nothing more fascinating than swimming; there is nothing more healthful.

Woman, man, or child—any person who undertakes to become a swimmer is certain of finding a new zest in life!

Swimming and Health

THERE is no sport which equals swimming in health value.

It can be practised by those of every age; it can be violent or gentle at will. One who seeks most strenuous exertion will be satisfied with a bout of crawl swimming; the person who desires more quiet recreation may try the smooth overarm-stroke: while the most frail invalid may safely indulge in floating and sculling—since the heart-resting, horizontal attitude gives ideal non-strenuous exercise.

Owing to the comparative density of the water the body weighs little or nothing when submerged for swimming. This means that a movement which would require much energy on land can be effected in the water with scarcely an effort.

What could be better for steadying nerves than fancy diving; or for simultaneously developing quick decision and stamina than a game of polo!

A strong spine is an asset, and in scarcely any other way can the spine get such helpful work as in trudgen or crawl swimming.

A healthy skin usually signifies a healthy body.

And again, swimming is the discipline *par excellence*. Not merely is the skin kept cleansed from the impurities it is continually exuding, but it greatly benefits from its exposure. Nowadays, the value of light and air, and particularly sunlight, to the body, is generally known. But our poor, light-starved forms have rarely an opportunity for invigorating sun-baths, except whilst we are bathing. In a few weeks, graduated sunbaths can make an extraordinary difference to a pallid, lifeless skin, and thus to the whole body.

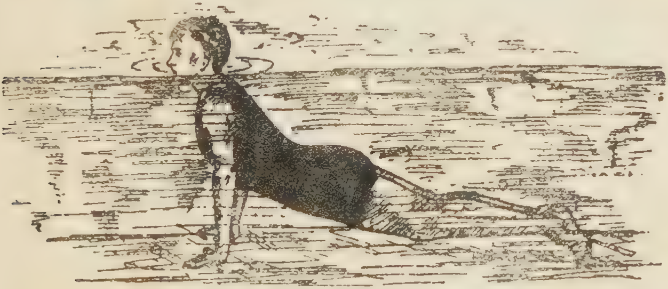
In ordinary times our breathing organs are used rather inadequately. Such shallow breaths are taken that the revivifying air rarely penetrates to the entire confines of the lungs. But in swimming, breathing is naturally much deeper than at other times, and no stagnant depths are left undisturbed after an exhalation.

There is one peculiar health advantage of sea-bathing —it is to the feet. Shoes often cause foot trouble to adults; sometimes they radically deform the feet, particularly of women. But to walk barefooted on wet sand is an unequalled corrective, and an unrivalled method of ensuring a well-formed, healthy foot.

Beginning

"WELL begun is half-done" most certainly applies to swimming. You may waste a season without swimming a stroke, if you begin badly; or you may be swimming within a week, if you begin well.

When you first enter the water go in with a rush. Jump, and duck your head right under—many a beginner vows that his head has been entirely immersed when only his nose and eyes have been wetted.



Confidence Drill

And then, straight away, you must set about gaining confidence, for this is the greatest essential at this stage.

I have devised a little "confidence drill" which you may like to try. It will ensure that you get through this preliminary work as speedily as possible. The water should be not more than two feet deep, twelve inches will be still better.

One—Go down on your hands and knees.

Two—Spring backward, without moving your hands, until your body becomes straight and you lie along the bottom, with head supported by your arms.

Three—Take a deep breath, and allow your arms to collapse sideways. Thus your head will sink beneath the water as you count *three*, coming back with straightened arms as you reach *four*.

Four—Spring to your feet.

If the water is too deep for this drill a "knee-bend' exercise may be substituted. The idea is merely to make you accustomed to having your head beneath the water.

The next exercise is intended to make you observe your breathing—for in all swimming it is necessary to breathe at the right part of the stroke.

One—Lie at full length (or kneel, if the depth makes it preferable) on the bottom, resting on your left elbow, and allowing your right hand to touch the ground. Thus the right shoulder is uppermost.

Two—Take a deep breath, gulping the air in through the mouth.

Three—Turn over on to your breast—lowering yourself by bending the right arm, and thus bringing your head under the surface. Now breathe out beneath the water, expelling the air through the nose in a steady stream. This exhalation will take much longer than the breathing-in, and it should be complete. You will then resume position *one*.

This breathing drill, now that you are lying down, can be continued with only two parts:

One—Breathe in.

Two—Breathe out.

After a little time you may add to this exercise the opening of the eyes beneath the water—a perfectly easy and harmless thing.

If you do not care for the disciplinary sound of the drills, you may perform the actions they include in any free and easy fashion you like—after which you will be well equipped to really begin, for the occasional duckings which you will almost inevitably sustain during early practice will have no terrors for you.

If you are of the sex that makes the most graceful swimmers, you should, however, first note the advice given in the later section "Women and Swimming".

Your next practice—in fact, all of the preliminary work before you begin learning the breast-stroke--will consist of gaining still more confidence; in discovering something of the surprising buoyancy of your body; and in proving some of the principles of floating.

Your methods may vary according as you are in a swimming-bath, the sea, or an open-air, fresh-water bathing-place.

If you are in a swimming-bath, wade until the water is about breast-deep. Now stoop forward and, with down-stretched hand and open eyes, try to touch your feet, without bending your knees. You will find to your pleasant surprise that the water resists your attempt to get down—it actually seems to push you upward. This is splendidly encouraging knowledge, for most novices have an idea that the water is a treacherous foe always waiting to engulf the bather who unwisely puts too much trust in it. That, you will now see, is a very wrong notion. The water should be treated as a good friend whose mannerisms need only to be understood before the most complete confidence may be placed in him.

In an open-air bathing-place you may practise this same thing, trying this time to pick up a stone or handful of gravel.

If you should be in the sea, having scrambled to where the water is about twelve inches deep, you will experience the same encouraging sensation, if you lie on your back. As each little foaming crest swirls past you will be lifted momentarily and washed in a little way. This is clear evidence that you are very buoyant. It will soon be apparent that if you happen to be sitting upright you do not move very much at these times, but if you are leaning back or lying flat, then you will be carried much farther. This illustrates a profound principle of swimming—the more of the body there is immersed the more easily does one float.

If you keep your hands on the sand by your hips a very slight downward pressure will be sufficient to raise the entire body. With a little confidence you will be able to walk about on your hands in this position—making believe you are floating.

Preliminary Floating Practice

The next experiment may be made in any sort of water, providing that it is smooth and not more than eighteen inches deep.

Sit down in this water, with the arms floating on the surface, stretched out at the sides of the body, palms upwards. Then slowly lean backwards until the head is in the water—the chin should be kept very high and the ears allowed to drop beneath the surface. The arms are now carried round on the surface until they stretch almost alongside the ears. At this point the top part of the body will be floating on the water, with the mouth quite clear—if every movement has been made gently enough. Next, straighten the body, by stiffening, and raising the hips, until the middle of the body rises to the surface. The heels alone will remain on the bottom and, perhaps, if you remain perfectly still, they, too, will rise.

In the swimming-bath or bathing-place equipped with steps you may try a still more advanced exercise. A friend may, if you wish, put a supporting hand beneath your back for the first trial. This exercise is to float horizontally on the water, face upwards. Your body will be quite straight—not sagging at the hips—and, with your hands, you will grip the rail running round the bath, or the edge of the steps, at the level of the water.

And by this time you will be sufficiently prepared to begin real swimming. Study the following sections of this book—A Course of Swimming, Learning on Land, Breast-Stroke, Diving—then go ahead!

Learning on Land

THE movements of several swimming strokes can be learned very satisfactorily on land, by means of simple drill. A good deal of trouble can obviously be saved in this manner.

The learner can rarely stay in the water more than a quarter of an hour, for he or she so soon gets chilled by standing only partly immersed. So that, by starting in the water, only fifteen minutes will be available for practising swimming movements.

But, on land, each part of a stroke can be practised for any length of time. You may work for a whole day till every movement becomes accurate and mechanical. It may not be quite so enjoyable as beginning in the water, but it is a much easier and surer way of learning. When a land drill has been thoroughly mastered then success in the water will come very swiftly.

As all the drills are to be practised standing it will only be possible to work one leg at a time, but this is not a serious disadvantage.

The numbers—*one*, *two*, and so on, should always be counted aloud for first trials—allowing about two seconds for each movement.

BREAST-STROKE

The breast-stroke has two parts—the action of the arms and of the legs—and each must first be practised separately. Each action consists of four movements. I will begin with the arms :

Stand with heels together and arms outstretched to the front, parallel with each other and the ground, palms facing outwards and downwards. Keep the head upright throughout the entire stroke. This is the *preliminary position.* Now proceed:

One—Do not make any movement.

Two—Sweep the arms round and outward until they are almost in line with each other and with the shoulders. At the close of the movement the hands should be about three inches lower than at the beginning.

Three—Begin the recovery by carrying the hands inward until they are in front of the chin, the thumbs touching and the elbows being drooped to the sides of the body.

Four—Slide the hands forward until the arms are once more straight, in the *preliminary position.*

The complete arm-action should take about five seconds, allowing two seconds between *four* and *one*, and one between the others. The recovery movement should be rather quick, and the pull powerful and deliberate.

After some practice the properly timed breathing should be added. The *preliminary position* now will be as before, with the head of course, upright. The arm movements are just the same:

One—Make no movement: breathe out.

Two—Sweep the arms round; breathe in through the mouth.

Three—Begin to recover the arms; breath is held through this very short movement.

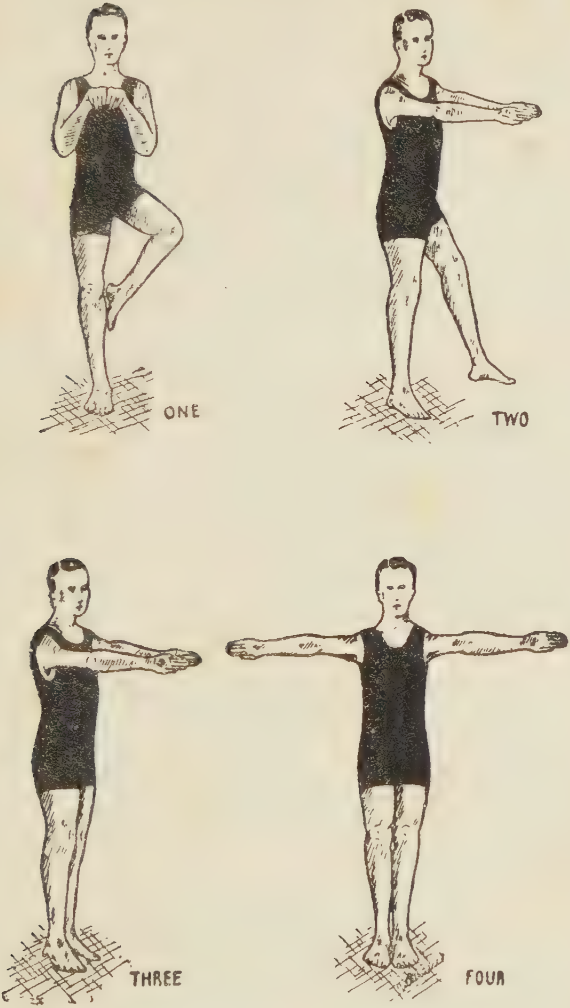
Four—Slide the arms forward; begin to breathe out.

To practise the legs stand with the heels together once more, in the *preliminary position.* The hands should be on the hips, and you will work the left leg first, standing on the right foot.

One—The legs remain straight and together.

Two—Still the legs make no movement.

Three—Draw the leg up until the left heel is against the right knee, the raised knee being pressed outward.



Land Drill, Overarm Back-Stroke. (*See page* 27).

Four—The left foot is kicked out to the side until the leg is at full stretch. Then, without pause, the straight leg is swept downward until it meets the other, and the *preliminary position* is thus reached once more.

The whole leg movement is continuous, the bend being fairly quick and the straightening kick very vigorous.

Each leg can be practised in turn.

It will now be easy to combine the movements of the arms with that of one leg. Start from the *preliminary position*, with arms to the front, head upright, feet together.

One—Arms do not move ; leg does not move ; breath expelled.

Two—Arms sweep round ; leg remains still ; breath is taken in.

Three—Arms draw up ; leg draws up.

Four—Arms slide forward ; leg kicks out and sweeps down ; exhalation begins.

Practise this combination with each leg in turn. By lying on the ground, with a box, hassock, or something similar supporting the lower part of the chest, you may even get the full stroke, with both legs—but it will not be very comfortable.

LIFE-SAVING BACK-STROKE, OR LEG BACK-STROKE

Stand with hands on hips, head well back. The leg action is similar to that of breast-stroke, though the leg is raised backward and the knee moved but little. The arms have no action.

SHORT-ARM BACK-STROKE

Stand as in the last style but with arms at sides. The combination of arms and legs goes thus :

One—Leg does not move ; arms remain still.

Two—Leg draws backward; arms move outward until hands are about twelve inches from thigh.

Three—Leg kicks out and closes; arms sweep in.

Four—No movement.

UNDER-ARM BACK-STROKE

Stand as before. The familiar kick is used, but the arm-action is more complex, so can be learned first.

One—Bend the elbows backwards, lifting the hands—which must not during all this movement be allowed to come in front of the body. The thumbs will slide up the sides of the legs, keeping in touch with them all the way, until they reach the hips.

Two—The hands continue to slide up the sides of the body, thumbs inward. By the time the hands reach the shoulders they will have turned over so that the palms are facing the front. Still they are pushed up, until they are fully outstretched above the head. The hands will be the width of the shoulders apart, palms now facing outwards.

Three—The straight arms are swept outwards and round, in great half-circles, until they come once more to the sides. Throughout the whole sweep the palms are leading.

Four—No movement is made.

The combination of arms with one leg works thus:

One—Hands move to hips; leg lifts backwards in recovery.

Two—Arms stretch upwards; leg kicks out to the side, and sweeps in.

Three—Arms sweep down; leg remains still.

Four—Arms remain still; leg remains still.

OVERARM BACK-STROKE

Stand as for the underarm drill, which differs in only one detail from this. The difference is in the long recovery movements which will not now be made up alongside the body, though it will occupy numbers *one* and *two* as before. This arm-action is as follows :

One—Carry the hands just in front of the body until they meet, back to back. They are then swung forwards and upwards, the arms remaining straight until they are straight in front of the body, parallel with the floor.

Two—This upward swing continues without pause. As the arms pass above the head the hands separate and finally reach a position the width of the shoulders apart, palms facing outwards, and arms upright—as at the conclusion of *two* in the underarm drill.

Three—The straight arms sweep round to the sides, in big half-circles, the palms leading.

Four—No movement is made.

Combined with the movement of one leg, the result is thus :

One—Arms swing forward—level ; leg, below knee, recovers backward.

Two—Arms stretch upwards ; leg kicks out sideways, and sweeps in.

Three—Arms sweep down ; leg remains still.

Four—Arms remain still ; leg remains still.

SIDE-STROKE

This is more difficult than any drill I have described, because it has three distinct parts—or rather four, since each leg works somewhat differently. Assuming that you intend to swim on your left side your left arm will be called the lower arm, your right the upper.

Stand with feet together, right arm at the side, and left arm bent up so that the back of the hand touches the shoulder and the elbow is near to the hip.

First practise lower, or left arm :

One—Shoot the hand upwards until the arm is fully extended, its biceps touching the ear. The palm should still be facing outwards.

Two—No movement is made.

Three—The arm is swept outwards, through a quarter-circle, until it is in line with the shoulders, and parallel to the ground.

Four—The hand is brought to the shoulder, into the preliminary position.

The upper, or right-arm action is entirely different :

One—The hand is brought upwards and across the front of the body until it reaches the left shoulder. At this point the palm must be facing outwards and the back of the hand touching the left collar bone. No pause, however, is made—for the movement is only half-completed. The hand then moves upward—in the same line that the left arm follows—until the arm is fully outstretched and slanting across the face, with the elbow just in front of the nose and palm still outwards.

Two—The straight arm sweeps forwards and downward until it reaches its original position at the side.

Three—No movement is made.

Four—No movement is made.

In a combination of the arms the right hand, hurrying across the body, catches up the left just as it has begun to rise. The tips of the first and second fingers of the right hand then touch the base of the left hand's thumb and continue in that position during the remainder of the upward recovery. (*See illustration, page* 47.)

The arm combination may now be tried—remember to start with left hand at the shoulder, and the right at the side :

One—Both arms glide upwards.

Two—Left remains still ; right sweeps to side.

Three—Left descends quarter-circle ; right motionless.

Four—Left reaches shoulder ; right motionless.

The right leg will now be called the upper, and the left the lower. In the scissors kick the upper leg is always drawn forward for its recovery and the lower bent backward.

The upper leg, for its preliminary position, will be lifted straight forward, the knee being bent and the toes depressed, until the heel is about five inches from the ground. The lower part of the leg will hang limply from the knee so that the heel will be but a few inches in front of the toes of the left foot.

This upper leg movement is as follows:

One—Stamp down the right foot into its normal position on the ground alongside the left.

Two—No movement is made.

Three—No movement is made.

Four—The leg recovers into its preliminary position.

The lower leg works similarly, except that it is drawn backward instead of forward. Its preliminary position is with its lower part, below the knee, bent back so that the shin is almost, but not quite, parallel with the floor. The foot should hang limply, and the toes will thus be about five inches from the ground. The knee will have moved back not more than an inch or two from the right leg.

Here is the action:

One—Stamp the foot down until it comes alongside the right, and in its normal position.

Two—No movement is made.

Three—No movement is made.

Four—Recover the leg into its preliminary position.

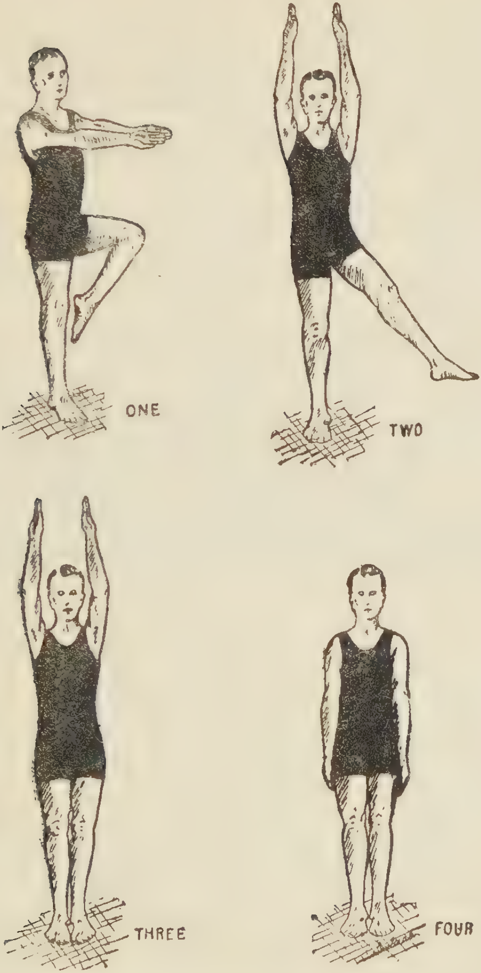
Both legs together may be tried whilst you are lying on your left side across a chair or bed.

The combination drill of both arms with right, or upper leg, works as follows:

One—Arms extended upwards; leg stamps down.

Two—Left arm remains still; right sweeps down; leg remains still.

Three—Left arm descends; right arm and leg remain still.



Land Drill, Overarm Back-Stroke. *(See page 27).*

Four—Left arm reaches shoulder ; right remains still ; leg recovers forward.

It must not be forgotten in these combinations that each leg begins from its preliminary position—as does the lower arm. The left leg combination works like this :

One—Arms stretch upward ; leg stamps down.

Two—Left arm remains still ; right sweeps down ; leg motionless.

Three—Left arm descends ; right arm and leg remain still.

Four—Left arm reaches shoulder ; right remains still , leg recovers backward.

This side-stroke drill may seem rather complex, but it consists of approximately the same movements that have to be made in the water—and it is certainly much easier to attempt them first on land than in the water.

By the time the side-stroke can be properly used you will have no need for further land practice, for you will have become a fair swimmer, so will have little trouble in adopting the remaining three strokes—overarm, trudgen, crawl—these follow on naturally from side-stroke.

The Six Strokes

THERE are six main swimming strokes, and the properly efficient swimmer must be expert in them all—breast-stroke, crawl, back-stroke, side-stroke, over-arm, trudgen.

BREAST-STROKE

Water about breast-deep should be chosen for your first attempts—unless you happen to be in the sea where there is a heavy swell.

Begin by practising the limbs separately, as you did on land; starting with the arms.

Finally the combination of arms and legs must be mastered.

Should you have the assistance of a friend he may support you for a time with a hand beneath your chest—standing at your side, behind the reach of your own movements. Begin with extreme slowness, making every movement complete. Your friend may call aloud the drill numbers. As you become more skilled he may lessen his support until at last he has removed his hand altogether.

If you are alone, you will begin by pushing off from the bottom or side of the bath, so that you glide forward with arms, body, and legs all in one straight line. Then continue to count to yourself, as on land.

One—Continue the glide, making no movement, but breathing out.

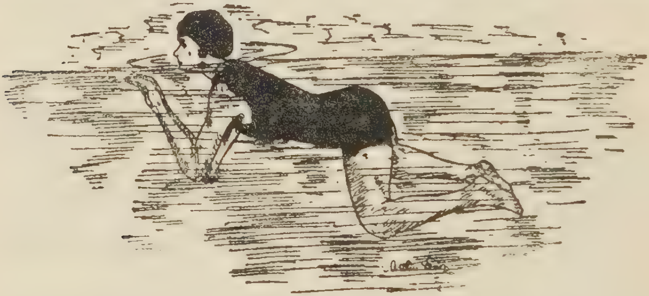
Two—Sweep the arms round almost to the shoulder line, each arm slanting downward about three inches during the entire pull. Take in air by the mouth. The legs remain straight and together.

Three—Droop the elbows and bring the hands in front of the chin; draw up the legs.

Four—Slide the arms forward; kick the legs out and sweep them together.

See that your arm-pulls are steady and powerful; your recoveries quick, and all your movements smooth and continuous.

When at last you are swimming your first few yards there are one or two special temptations to which you will be liable. The first is to increase the speed of your movements on the assumption that unless you work desperately hard you will sink. This is a serious error, for your speeding-up will inevitably mean that your movements are less accurate and complete, and thus your chance of keeping afloat will actually be lessened. Your second temptation has already been indirectly suggested—it will be that of trying to keep your head too high out of the water, so that you will be "safer". This, too, is erroneous, because of the principle previously referred to which makes it desirable to keep as much of your body immersed as possible. In keeping your head too high, therefore, you are both wasting your energy and lessening the floating capacity of your body. Let the chin be constantly submerged, but the mouth clear of the surface.



Breast-Stroke

Providing you resist these two temptations it will not be long before you get along five yards, and then ten. And from this point you should aim constantly at swimming increased distances, and reducing the number of your strokes.

See that all your movements are big and deliberate, so that you seem to move leisurely, but with unmistakable power and speed.

It is very important that the legs shall remain near to the surface all the time, especially during the glides when they are straight and together. These glides, with straight body and limbs, are a most important feature of the stroke.

When your arms come to draw up for their recovery, the palms of the hands must somewhat flatten, so as to get a slight pressure on the water which helps to support the head during the recovery. This supporting action, however, must not be so marked that it interferes with the smooth arm-recovery or in any way hampers progress. One of the learner's chief obstacles in the breast-stroke is the sinking of the head during recovery, but in this way it can be prevented.

The important point to remember about ordinary breast-stroke is that the head remains above the surface all the time.

The breast-stroke just described is the standard style which allows the head to be above the surface all the time. In order to get more grace and speed it can be varied by making the arm stroke very short with a sharp downward slant and quick recovery and allowing the lower part of the face to submerge between breaths. This involves breathing out under water and gulping each new breath through the mouth. With long glides this stroke is very attractive.

CRAWL STROKE

If this stroke is to be mastered satisfactorily it must be practised part by part.

1. *Breathing Practice.*—If you are in a bath, or any bathing-place with a rail along the side, you can grip this rail, facing towards the bank, and so lean forward until your face is on the surface of the water.

Start with the chin by the left shoulder, so that your right ear and cheek are immersed. Then turn the head to the front, keeping the eyes just above the water level, and breathe out through the nose, steadily. There will be no pause, but as soon as it is straight to the front the head will begin to turn back again to the left until it reaches the preliminary position. All this time you will have been sending out a steady stream of air bubbles from the nostrils, and the last bit of air will be expelled just as the mouth rises clear of the surface.

Immediately the mouth will open, as widely as possible, and a new supply of air will be gulped in—the lungs can be filled much more quickly by way of the mouth than through the nose.

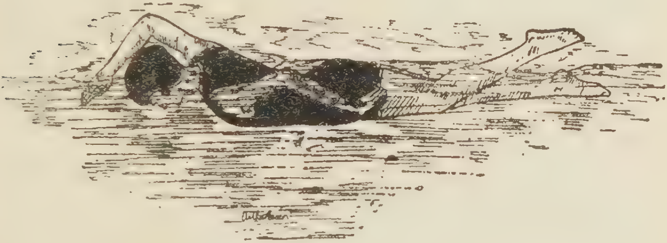
As soon as breath has been taken, the head will swing to the front once more, submerging the nose and the lower part of the face.

2. *Leg Movements*—For this you will hold on to a rail at the side of the bath, or some convenient step or piece of bank. By gripping with one hand at the water level and having the other one flat, about a couple of feet below, you will be able to hold the body horizontally along the surface of the water, in exactly the position it will have in actual breast-crawl swimming.

Let the legs thrash smoothly up and down, no more than the heels breaking above the surface. The toes will be pointed the feet turned inward ; the knees and ankles stiff at the first—just as already described. But now, with the water resistence it will be a very different matter, and you will find that the legs not only keep the body along the surface but tend to push you head-foremost. Put plenty of vigour into your movements so that the water swirls strongly about your feet. Each beat should be eight to twelve inches deep.

3. *Arm Movements.*—Stand with the body leaning forward comfortably until your shoulders are submerged.

Begin with the right arm down by the thigh and the left arm stretched out to the front. This latter will be just above the surface, the palm facing downward and fingers together.



Crawl-Stroke

The left arm now drives through to the thigh, keeping straight and rigid for the first half of this semicircular sweep, but allowing the elbow to bend gradually during the second half, so that the forearm can remain fairly vertical and obtain maximum backward pressure.

At the same time the right arm will have been recovering above the surface. First it will lift from the water, close to the side of the body ; then the forearm will be swung round quickly, just above the water, until it points forward, the palm meantime revolving until the back of the hand is uppermost ; lastly the arm glides slowly forward to full extension, still above the surface.

Each hand should dip in front of the eye on its own side, and follow an imaginary line beneath the middle of the body, until it is compelled to swerve outward to avoid the hip.

4. *Arm Movements Combined with Breathing.*—Lean well forward to begin, in the same preliminary position—right cheek on the water with mouth just clear of the surface; left arm stretched to the front, ready to dip; right arm down by the side. You may work by imagining the numbered sections of the drill as follows:

One—Turn the face forward, the eyes just above the surface, then swing it back, exhaling through the nose in a steady stream; drive the left arm through to the side, keeping the hand flat and every muscle tense so that the greatest possible power is exerted; the right arm recovers forward to full extension.

Two—Breath is taken in, the mouth opening wide above the surface; recover the left arm to the front; drive the right arm through to the side.

5. *Exercise for Body Poise.*—Firstly you will push off from the side of the bathing-place with your feet and glide face downwards along the surface of the water, the body being quite straight and the arms stretched beyond the head. This is almost exactly the position that you will have after a very flat dive or plunge. You must keep quite still, but avoid any stiffness of body or limbs. Palms should be flat and facing downwards; head should be dropped between the arms; knees should be touching; feet pointed and together. Notice how a dropped shoulder or limb, or a bending of the body, will deflect your course and impede the smooth glide.

Secondly, perform this same glide, but add the crawl leg-thrash which you have already learned. This will lengthen the glide, and give you the real feeling of crawl swimming as you are helped by the force of the drive. Of course the glide will only last as long as your breath holds out.

Thirdly, still perform the same glide, together with the leg-thrash, but, as soon as the legs are working smoothly, begin also to use the arms in the manner of dog-paddling, reaching forward and driving down each hand in turn. Thus you can better support the head, and will be able to take breath.

6. *The Full Stroke.*—This will follow on quite naturally after the work described in the last paragraph.

You will always begin by setting the legs in motion, and when they are working powerfully and smoothly then the arms will take up their work.

Do not put fullest pressure on your hand immediately it dips, for this will simply lift you in the water; let the pressure increase gradually. At first your chief attention will go to the arm work—seeing that rolling of the body is avoided, that the arms are limp during the recovery, and so on. The shoulders must not drop too deeply in the water, and the eyes should mark the deepest immersion of the face.

As you get more practised you will find a rhythm of the legs asserting itself. This natural rhythm, when it does show, should be encouraged. Most likely you will find yourself fitting three leg beats to each single arm-drive. This gives six thrashes to the full arm-cycle, and results in the popular "six-beat crawl". You will encourage this rhythm by emphasizing the first beat of each three—just as the first and fourth beats in six-eight time music are accented. Thus the leg thrashes will run—*one*, two, three; *four*, five, six, and if two, three, five, six beats are about eight inches deep, then *one* and *four* will be more like fourteen inches. Each of these two major or accented beats will coincide with the start of the arm-pull; then the minor or unaccented beats will immediately follow while the arm-drive is taking place.

BACK-SWIMMING

With back-stroke, majestic and mighty, to glide
Like a proud Spanish galleon, unfearful of tide,
While the sun sparkles bright on each limb sweeping wide—
'Tis glorious to be a swimmer!

Back-stroke, too, will have been practised by means of its land drill before it is attempted in the water. But before the actual swimming is begun some preliminary work at floating must be done. It is not necessary that you should actually be able to float but, at any rate, you should follow the instructions given on another page for "Horizontal Floating".

The position of the body in all back-swimming is, or should be, the position it has in horizontal floating. This is the first great rule, and there is no other of comparable importance.

The body must lie at the surface of the water—the ears immersed, the chin high, the shoulders low, the chest bulging out of the surface, the stomach awash, the knees just breaking clear, and the feet pressed down so that they, with the tops of the legs, form straight lines.

The unpardonable sin for the back-swimmer is to sink the middle of his body so that he appears to sit in the water.

There are four varieties of back-stroke, and for each I have devised a land drill. They should be studied in this order—leg back-stroke, short-arm back-stroke, underarm back-stroke, and overarm back-stroke.

In the leg back-stroke the arms are not used. They may be folded across the chest—in which case they will be out of the water the whole time; clasped beneath the back—an excellent way of keeping the shoulders down, if the arms are straight and rigid; or held out sideways with hands on hips—usually the best way for the beginner.

When the legs are drawn up see that your knees are spread widely, otherwise they will jut above the surface and so sink the middle of your body—the unpardonable sin. As in the breast-stroke, the feet must be square as they kick out, so that the soles thrust against the water. At the close of the sweeping together of the legs the feet must once more be pointed, so that, during the gliding-pause, number *four*, the insteps do not catch the water and hinder progress.

The kindly friend may be a great help still in all methods of back-swimming, for the earliest attempt.

Back-Stroke

Whether or not you have some assistance, you should have done all the preliminary exercises described in the section "Beginning".

Water-wings may also be used.

The short-arm back-stroke is but a slight elaboration of the style just described. The arms merely perform a short paddling action down by the sides of the body, both working alike and simultaneously. The arm, to begin, lies straight down by the side. It is then carried out, keeping at the same level, until the hand is twelve to eighteen inches from the thigh. This action must be made gently, and with hand flattened so as to offer the least resistance to the water. The little finger leads the way in this recovery, and the hand is thus facing palm downwards. Then the hand turns until it is vertical—thumb highest, little finger lowest ; and the whole arm is swept in to the side of the body with utmost force.

This forceful arm-stroke takes place with number *three* of the leg action—the kick.

The short-arm back-stroke is the style referred to in the section "Swimming in Two Days".

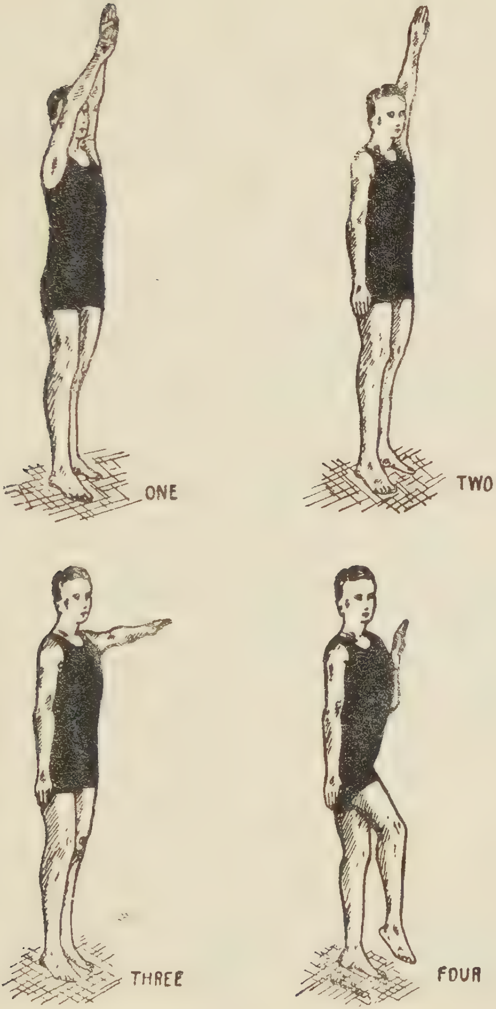
The underarm back-stroke is a very beautiful, yet little practised, method of swimming. The movements will have been learned from the land drill.

The leg action—the frog-kick—is precisely the same as in the other three back-swimming styles.

You must be very careful as you make the arm recovery, up the sides of the body, that the hands do not break above the surface. As soon as possible, and for most of this movement, the hands will be palms upwards. Take care, too, that the hands are the necessary nine to twelve inches apart at the moment when they are fully extended beyond the head. It will be seen that if, at this point, they were touching each other, then that first short section of their succeeding movement would have no *positive* quality—it would neither be giving necessary support or aiding progress ; it would, in fact, be a *negative* action, since the sideways pressure on the water would act as a sort of brake to the body.

During the powerful, semi-circular sweep of the arms, the hands, thumbs upward, should never be more than a few inches below the surface.

The proper combination of arms and legs is not difficult to achieve. The legs are drawn up and kicked out while the arms are making their long recovery ; the closing together of the legs comes when the arms are about to begin their second movement, and the arms sweep round while the legs are motionless in their number *four* gliding-pause.



Land Drill, Side-Stroke. (*See page* 28)

The overarm back-stroke is the finest of all back-swimming methods. It is powerful and imposing in appearance, and yet not tiring.

In only one respect does it differ from the underarm style—the arms make their recovery movement out of the water instead of beneath the surface. It bears exactly the same relation to the underarm back-stroke that the overarm does to the side-stroke.

The hands are lifted from the water down by the sides of the body and crossed inwards until they meet back to back. Having made this precaution to gain steadiness and unanimity, they are carried over backwards, the arms remaining quite straight. At the point where they pass above the head they begin to separate and draw more and more apart as they near the water, until when they are ready to dip they are the proper distance apart.

At this instant a most important feature of the stroke must be noticed. The hands, edgeways, with little fingers almost touching the surface, are made to pause for the briefest moment. This is to allow them to become perfectly steady, so that when they dip there is no splash whatever. You may usually distinguish a good from a bad swimmer by the presence or absence of this pause. The hands of the poor swimmer simply flop down into the water without any preparation, and make a heavy splash—this both hinders progress and looks unpleasing.

The arms and legs combine precisely as in the underarm style.

SIDE-STROKE

The side-stroke is rather neglected nowadays, largely because the modern craze for speed has even invaded the swimming world, so that many people are desperately anxious to run without going to the trouble of learning to walk.

Although the side-stroke is no longer used for racing purposes it is still absolutely indispensable in the complete swimmer's education.

Without first knowing trudgen, one cannot properly learn the crawl; without overarm, trudgen is almost impossible; and without side-stroke, overarm is unthinkable. Side-stroke is thus the foundation of all the faster modes of swimming, and must be learned before they can follow on in turn.

The side-stroke has three parts—the movements of the upper arm, of the lower arm, and of the legs. Each of these parts must be practised separately. They should already have been learned by the land drill.

I will describe swimming on the left side—if desired, the directions can easily be reversed. It is a good plan to lie on one side for side-stroke and on the opposite for overarm.

The first practice with the arms can be had while you are standing in the water, stooping sideways until the approximately correct position is reached. Or, of course, you may be held up on the surface by an obliging friend. As, however, you are now able to swim by the two previous strokes you are not likely to have any nervousness in this, so that to work unaided will be no great hardship.

For practising the kick you can cling to the side or bank in a similar fashion to that described for breast-stroke.

The underarm movement, with its two parts, should be first tried.

Begin with the arm fully extended beyond the head, about parallel with the surface of the water, and a few inches below it. The hand should be properly cupped, with palm downward: the biceps muscle should be just beneath the ear.

On *one*, the arm sweeps down, keeping straight, until it has passed through a trifle more than a quarter-circle and is slightly beyond the point at right-angles to the surface of the water.

On *two*, fold up the arm; recover the hand up to the shoulder ; then thrust it forward again into the preliminary position.

The upper arm starts from lying down alongside the body.

On *one*, it is slid up the body, very much as in underarm back-stroke, until it is extended beyond the head, palm outwards. It does not, however, follow the same line forward as the left or lower arm, for by so doing the first twelve inches of its next movement would be useless. Instead, it is straightened into such a position that the elbow is about six inches in front of the nose. The reason for this is the same as prevents the hand touching each other when entering the water in overarm back-stroke, or when extended to the front in breast-stroke.

On *two*, the right arm sweeps round powerfully to the side—the preliminary position. During the entire movement the arm remains but a few inches beneath the surface.

The sweep round is exactly similar to the sweep of either arm in underarm or overarm back-stroke.

After this separate practice the arms should be combined. The numbers just given do not correspond with the land drill, but should be examined in conjunction with it. The drill numbers, however, should be used for early water-practice.

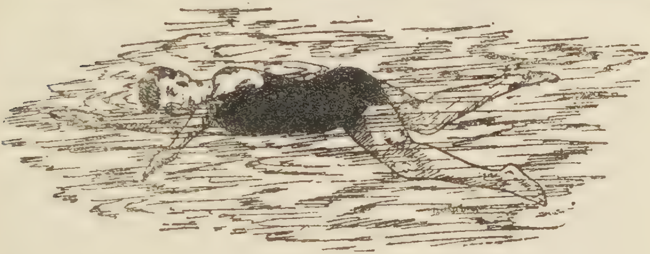
Both arms shoot forward together, but the lower arm remains extended beyond the head, like an outrigger, while the upper arm makes its entire sweep to the side. Whilst the upper arm pauses here for a moment, and then makes its quiet recovery up the body, the lower arm performs the downward sweep and its own recovery movement.

Next, the legs must be tried. Their action is termed the scissors-kick, and is entirely different from the movements of breast-stroke.

If the frog-kick were made by a side-stroke swimmer the upper foot would be driven out of the water. So, the scissors-kick is one which enables the legs to remain on the same plane, parallel with the surface. Their movement is backwards and forwards, instead of up and down.

The upper leg is drawn gently forward until the knee is just slightly bent ; and the under leg drifted back until the lower part of the leg, below the knee, is about at right-angles to the line of the body. Then both legs are vigorously stamped in together, until they are again quite straight, with ankles touching.

The legs must not be opened too widely, or the negative resistance of the front of the right thigh and the back of the left calf will be too strong and will seriously hamper the progress of the body.



Side-Stroke

The legs make their kick whilst the right, or upper arm, is recovering, and recover themselves as the same arm makes its stroke.

This combination of all the limbs is difficult and must be closely studied. It will be very helpful to watch how a good swimmer manages it—but be sure to find a good swimmer.

In side-stroke you should aim at lying horizontally on the water. The lower ear should be immersed, and even the eye, and the legs should be near to the surface.

The right shoulder remains just above the water, and care is necessary that the upper arm makes no splash during its recovery up the body.

Many side-stroke swimmers make a considerable gliding-pause at the end of the upper-arm sweep and the kick; thus, the position is—lower arm at full stretch beyond the head, upper arm lying straight down by the side, legs straight and together.

OVERARM

An overarm stroke is a beautiful thing,
The cheeks and the water so restfully cling,
The upper arm circles with unhurried swing—
'Tis glorious to be a swimmer!

To the efficient side-stroke swimmer overarm comes very easily. It can best be considered as a side-stroke in which the upper arm makes its recovery movement through the air instead of beneath the water.

One side is as good as the other, but if you happen to do side-stroke with your left shoulder uppermost it will be a good plan to swim overarm on your left side with the right shoulder on top. Naturally this will help towards more general ability.

As in side-stroke, you must lie right on the surface of the water, with ear and eye immersed so that the legs may keep near to the top.

The lower arm works precisely as in side-stroke.

It is to the upper arm that belongs the distinction of making the overarm the most beautiful of all strokes.

This top arm makes it sweep through the water just as in side-stroke.

When it reaches the side, however, it is lifted from the surface and swung round to the front, ready to be dipped for its next stroke.

The position of the arm and hand during this recovery is all-important. As the arm leaves the water the elbow becomes and remains its highest point. The hand, always cupped, has the palm facing towards the feet for the first part of the movement and at its conclusion the back of the hand is towards the face. The hand should droop gracefully from the wrist so that the finger-tips almost touch the water's surface—but not quite. The elbow must not be sharply bent so that the arm is angular ; but it must be so flattened that the whole top line of the arm from shoulder, over elbow, wrist, and little finger, forms one smooth, pleasing curve.

The arm must not be lifted too high during this recovery, for that is waste of energy and may roll the body on to the back ; neither must the arm be too flat nor reach too far out, for this will inevitably drag the body over on to the breast. The swing of the arm should be so graceful and free that the top shoulder is undisturbed.

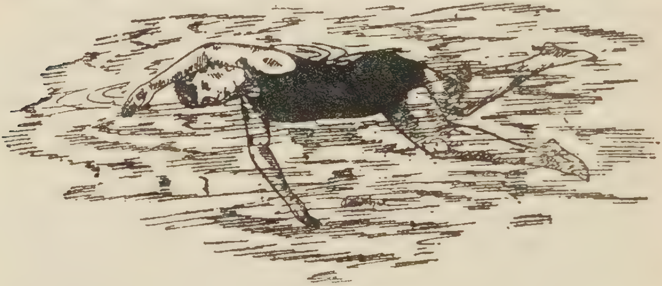
When the upper arm is at its farthest stretch forward, the elbow should not be right round against the face, but about six inches from it—there will thus be no useless part at the beginning of the sweep. In this respect the overarm corresponds again with the side-stroke.

How far the hand is stretched beyond the head cannot be here decided, it depends entirely on the swimmer's build and length of limb. Some swimmers scarcely bring the hand farther forward than their nose, but this is not to be recommended, for it will undoubtedly cause the elbow to be bent so sharply as to give a very angular and inelegant effect. If you endeavour to carry the hand too far, this exaggeration will be equally faulty, for it will both straighten the arm and roll you over on to your breast. The only safe rule is to give all your attention to the gracefulness of the top curve of your arm, and then the arm will reach as far as it may.

The hand must not be dropped into the water immediately that it reaches the requisite position. Instead, a momentary pause must be made in order that you may gain such perfect poise that when the thumb and first finger do lead the way beneath the surface there will not be the least splash to mark their entry. When the upper arm dips it begins instantly its propulsive sweep towards the side. A common fault is for the hand first to be pushed forward until the arm is quite straight beneath the water, and then to begin the *positive* action. This is absolutely wrong. The positive movement must begin as soon as the hand is immersed and the arm only becomes straightened as it is sweeping round.

Usually the upper arm goes rather deeper in overarm swimming than in side-stroke.

When the top hand reaches the side a little embellishment of decided utility may be added. The hand, revolving on the wrist, as it rises the last few inches, makes a forcible sculling-thrust towards the feet. This flings the hand up out of the water and sends a light swirl of spray down beyond the legs. Then the hand recovers as described.



Overarm

The combination of all the limbs is made as in side-stroke swimming—the kick being made during the recovery of the upper arm, this arm dipping just as the lower arm makes its recovery.

When some facility has been gained you may try a slightly improved form of the scissors-kick.

When the legs are stamped in together they should be allowed to pass each other, by their own impetus, instead of being stopped when the ankles meet. The top leg will thus travel until its instep is four to six inches behind the opposite heel. In the next big recovery movement there will thus be a small wedge of water to be expelled before the legs properly open; and this slight addition will be a benefit.

The feet should always swing loosely on the ankles, and during the whole of the scissors-kick there is no point at which they are held squarely as in the movement *two* of the frog-kick. In driving out the small wedge of water just referred to, for instance, the heel and sole of the lower foot will be opposed by the lower part of the shin and the instep of the upper.

In fast overarm swimming it is often an advantage to completely submerge the head during a part of each stroke. At such times exhalations should be made beneath the water.

In all overarm swimming, breathing-in should be effected when the lower arm is making its downward stroke—for this is the time when the head is best supported.

Having learned the overarm on one side get some facility in swimming with the opposite shoulder uppermost. But it is wise to specialize in swimming on one side, that your stroke may be brought to perfection.

TRUDGEN

With trudgen or crawl to swirl along,
Like a rakish destroyer, untiringly strong,
While the waters acclaim with tumultuous song—
'Tis glorious to be a swimmer!

Trudgen

An amazing number of weird and wonderful things are perpetrated under the name of this stroke. Almost every blunderer who manages to fling his arms out of the water, more or less alternately, vows that he is swimming trudgen. The name trudgen is given to violent frenzies that splash a good deal of the bathing-pool on to the bank and leave the swimmer dazed and exhausted after having covered five or ten yards.

Yet, actually, the trudgen can be very beautiful and scracely more fatiguing then overarm.

Trudgen can be most easily understood as an overarm stroke in which the lower arm recovers above the surface.

The fundamental thing about trudgen is that the swimmer remains flat on his breast, just as in breast-stroke.

As the arms work alike the stroke has only two parts —leg, and arm movements.

When an arm reaches the side of the body it is lifted out of the water and swung round to the front, just clear of the surface.

Practically the whole success or failure of the stroke depends on this recovery movement—it must be round, not over.

The commonest of all faults among trudgen swimmers is the carrying of the arms over. A few experiments will show that if the arm is lifted high into the air it raises the shoulder and so tilts the body on to one side. The similar raising of the other arm a few seconds later throws the body back on to the opposite side, and thus a continuous rolling motion is set up. This is a serious fault in trudgen swimming, for, since energy must be expended to effect that rolling, the energy is clearly being wasted —for rolling cannot help you forward. It would then be very much better if that power were saved—and in a good trudgen it is.

The arm as it sweeps round, must be as straight as possible, and the back of the hand must be turned towards the front. At no point must the thumb be more than an inch or two above the water—providing, of course, that the water is smooth.

The forward swing of the recovery is completed when the arm is almost in line with the body. It has already been pointed out in previous sections why the arm should not be quite in line. At this point a momentary pause is made, as in overarm, to ensure absolute steadiness and control. Then the hand is dipped, thumb first, and without the slightest splash.

The arm remains fairly straight as it is driven backwards through the water, at an angle of about forty-five degrees from the surface at the deepest point But as the hand reaches almost the end of its sweep, and is a few inches from the side, the same helpful fling of the wrist can be added as was described for overarm, the fingers twisting, out from the side of the body, and then upward. This action, combined with the straightening jerk of the arm, sends the hand out of the water.

The action of each arm is precisely similar.

Special care is necessary to ensure that the pause is made before the dipping of the hand ; that the palm of the hand at this moment faces outwards, and that the arm is low and straight during the recovery swing.

The trudgen leg-stroke is usually the scissors-kick of side-stroke or overarm, and at the beginning certainly should be one of these.

Legs are opened out normally, the leg on the side of the upper arm being drawn forward and the other leg pressed backwards. This movement is made gently, but next, the legs are stamped in together with utmost force.

Of course, as the body is flat on the water the legs' action will be more vertical than for side-stroke or over arm.

Many overarm swimmers, when using trudgen, think of it strictly as an air-recovery overarm, and so make their ordinary kick only in time with that arm which they consider as the upper one. In this style the legs remain straight and together during the swing round of the other arm.

Some swimmers make a kick for each arm-stroke, thus they get left and right side kicks alternately.

It is good to try both of these modes, until the combination of arms and legs works smoothly, but then a new style can be studied.

The other style, which is the most satisfactory method of trudgen kick, introduces a feature which we have not yet met, but which will be more fully developed in the crawl. It is usually called the leg-flutter.

The single kick, which I have already described, is made during the recovery of what one chooses to consider the upper arm. But the legs, instead of remaining straight and together during the swing round of the other arm. perform several short, rapid flutters, rising in turn from the surface, as described for the "crawl".

For this flutter the legs must move only below the knees. The feet are pointed, the knees together, and the legs pass and repass each other, the feet never getting more than nine inches apart.

Thus the leg-flutter fills in the gap between the kicks, and progress is more even and continuous.

Other Strokes

BACK-CRAWL

THE back-crawl is becoming increasingly popular. It is the newest of all swimming strokes, and probably the most graceful. And for back-stroke racing it is unrivalled, for speed and distance.

As in ordinary back swimming the body lies along the surface, but this time not quite flat—the middle of the body should sag slightly and the head should be a little raised.

The best way to learn is to begin with the leg movements. Leg-thrashing best describes the action—it is not a kick for there is no recovery movement as in breast-stroke. Except that the legs emphasize the upward direction beats instead of the downward it is simply the plain crawl-stroke action, upside-down. Keep the legs supple and the ankles loose, but see that there is no bending at the knees at any time. When a leg is at its lowest point the foot is twelve to fifteen inches from the surface. At this instant the other leg is high and in line with the rest of the body. Next moment the limbs have reversed their position. The leg action, of course, must be vigorous.

Next, the arm action must be added.

The arms work alternately and time in with the legs. Each arm is lifted from the water, at the side of the body, and carried over backward with elbows sharply bent. Without any pause the hand is dipped and swept through to the side by the shortest way.

BACK-TRUDGEN

This is a slightly less strenuous stroke. Its arm action is similar to that of the crawl, but rather longer and more leisurely. The arms are not so sharply bent, and so take bigger strokes.

A separate scissors-kick is made with each arm movement.

Suppose that the right arm is just making its recovery through the air. The hips turn slightly towards the right, so that the legs may open forwards and backwards and yet remain more or less parallel with the surface.

Back-Trudgen

The lower leg—which will be the right—is drawn forward, and the left bent back from the knee. These movements are made gently. But next, the legs are straightened and swept together with utmost vigour—remaining together until the arm-stroke is completed.

As the left arm leaves the water the legs perform their corresponding kick on the left side, just as already described. Or, alternately, they may perform a quick flutter.

SCREW-CRAWL

In this stroke the body glides through the water with a spiral motion—very much like that of a corkscrew.

To begin, lie on the breast, as for ordinary crawl-stroke. The legs perform their customary, continuous flutter, and the arms swing over out of water just as usual. But the secret of the stroke is in the direction of the arm thrusts. The right hand makes its dip beyond the head, but across near the left hand side of the body; it then sweeps under towards the right side of the body. The left hand begins its stroke on the left and follows as nearly as possible the course of the right. As a result of both hands working in the same direction, the body turns over and over.

Breathing-out should be performed whilst the head is turning beneath the surface; and breathing-in during the few seconds that the mouth is in the air.

Should there be any liability to giddiness during early attempts, the revolving should be reversed after each ten or twenty yards.

This can be a very fast stroke.

REVOLVING-TRUDGEN

This stroke bears the same relation to screw-crawl as back-trudgen does to back-crawl. It is neither so speedy nor so tiring, for the arm movements are less frequent and the legs need not work continuously.

The Use of the Strokes

A GOOD deal of swimming sense is required before the various swimming strokes, when mastered, can be appropriately used. I have purposely avoided comments on such matters in the sections describing the strokes, in order that such analyses could be brought more closely together here for convenience in comparing one style with another.

BREAST-STROKE

This, with crawl, is the most popular of swimming styles. Some crawl enthusiasts have tried to discredit it, but breast-stroke will never be supplanted by a style whose principal virtue is speed. The inestimable advantage of breast-stroke is that in it the head is held upright and quite clear of the water. You can see where you are going when swimming on the breast ; you can look about you ; talk with a companion ; hear what he is saying ; and you have no sort of difficulty in breathing, for no unexpcted ripples can wash over your head. In the sea the breast-stroke is invaluable, for no matter how choppy the water may be your head can still surmount it. If steep waves should come you will see them.

And lastly, breast-stroke is the style most useful for under-water swimming.

It may be slow but, so long as the aim of most swimmers is to gain enjoyment from their art and not merely to wrench themselves through the water in a minimum number of seconds, then breast-stroke will remain unchallenged as the most serviceable of all styles.

BACK STROKE

Back-swimming forms the basis for practically all life-saving methods, and for very much of fancy swimming—the first fact alone gives it highest claim among the swimming strokes.

Swimming on the back is much more restful than any other style, since the body is practically in the normal floating position, so that almost no exertion is required to keep one on the surface.

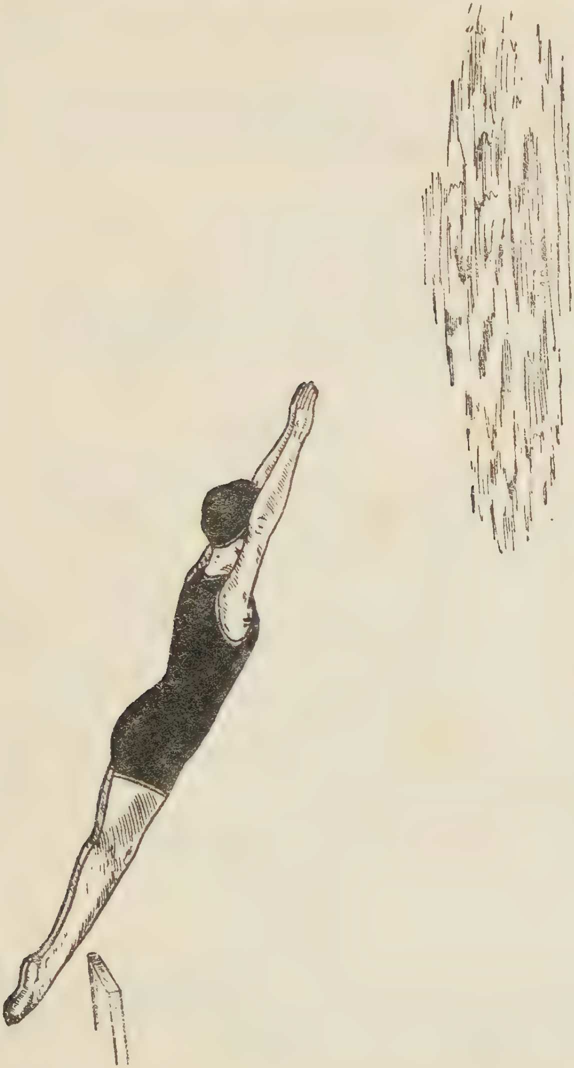
The easiest strokes are those in which the body is most immersed, for then it floats more readily. Every limb that is recovered out of the water gives additional speed—for the air resistance is less than the water resistance; but at the same time such air recovery makes it more difficult for the body to keep afloat and extra energy has therefore to be expended in keeping on the surface.

Breathing, too, plays an important part in swimming, and in the face-downward styles breath must often be exhaled when mouth and nose are immersed. This needs much practice. In back-stroke swimming, however, the face is clear right through so that breathing difficulties do not arise.

SIDE STROKE

It has been shown that side-stroke is really the foundation of the faster modes of swimming.

But, still more important, the side-stroke is one of the most beautiful and artistic of swimming styles; for



Plain Header. (*See page* 135)

sheer grace it can compare with back-crawl or racing breast-stroke.

And since fine swimming is so much more important than fast swimming—though this latter usually follows from the former—then side-stroke should be studied very thoroughly.

The breast-stroke swimmer will readily see one obvious advantage of swimming on the side. In breast-stroke, the negative movement of arms and legs are made simultaneously, and the body is thus seriously checked after each stroke. But in side-stroke there is always one positive movement in operation so that progress is more even and continuous.

OVERARM

The overarm is one of the most beautiful strokes, and among discerning swimmers it is very popular. It is moderately speedy but not fatiguing.

Breast-stroke is excellent for all-round use and distance, but not for racing ; crawl is very fast, but the head is apt to be enveloped in a swirl of spray. Overarm is midway. It is unstrained and natural, moderately fast, and yet does not disturb the surface of the water too much.

But one's chief aim in learning overarm should be to develop style. In no other swimming stroke can grace of movement be made so distinct.

The overarm, like side-stroke, is most suitable for smooth water, though it is not impracticable in a rough sea.

TRUDGEN

A most popular stroke for sea swimming is trudgen—providing that the water is not so rough as to interfere with the arm-recovery swings.

The head is, of course, held clear above the surface as in breast-stroke, except when the leg-flutter is added to the kick.

Trudgen is good for long-distance racing ; yet it can be almost as artistic as the overarm. It is considerably faster than either of the previous four strokes—this is largely due to the two-limb air recovery.

CRAWL

Crawl is the most natural method of swimming, and definitely the fastest. It is useful over any distance, and is the easiest full stroke for the beginner to acquire. No other method is used for free-style racing nowadays. But crawl is of little use in rough water, and no use at all if you wish just to paddle around and enjoy the sights and sounds of a bathing-pool. Children can learn crawl much more readily than grown-ups, particularly if the grown-ups have been long accustomed to other modes.

A full understanding of the values of the strokes comes only by much practice.

Supposing two people are in difficulties in the sea, and calling for help : you would start to sprint towards them by crawl-stroke ; the water might prove rough, so that you would be forced to adopt trudgen ; on reaching the spot, one person might be sunk—and, after a surface-dive, breast-stroke would be needed so that you might search beneath the water and so find the body. On rising with it to the surface, back-stroke would be necessary for towing the drowning one to land. Then you would return for the second drowning one. Being partly exhausted, and fearing to still further waste your strength at the start, you might commence the return swim by overarm, finishing it by side-stroke when the upper arm wearied. And for the second rescue, either back-stroke, breast-stroke, or side-stroke would have to be used.

Should you at any time have to swim with your clothes on you will find that those strokes are impracticable which have out-of-water limb-recoveries, since the weight of water-logged sleeves, or booted feet, makes them too exhausting.

The remaining swimming styles, described in the section, "Other Strokes", are chiefly for racing and ornamental purposes. They are of interest, principally, to the dilettante, and are rarely of such practical use as the first six strokes.

Bathing Advice

VERY few bathers, even experienced ones, know when to leave the water. It is usual to wait until one begins to feel chilly; many even stay until they shiver. The result is that after the bathe, instead of glowing vigour pervading the body, headache, lassitude, and chill are left.

There is always a moment in a bathe when enjoyment is at its fullest, when the body tingles with life and the water is sparkling. It may seem hard—but then is the time to finish the bathe and perpetuate the glow with a vigorous towelling. If you would feel that warm *joie de vivre* after the bathe, you must bring it out of the water with you.

On the Continent notices are frequently posted at bathing stations: "It is forbidden to enter the water during digestion time"—which is a period of two hours after a meal. This is an excellent rule, and one that should be everywhere enforced. A great many bathing fatalities occur each season among reckless people who flout this precaution.

Similarly it is foolish to bathe several times a day. For most adults, who are not trained athletes, once is enough; and, to get fullest enjoyment, that should be taken when the sun is warm, so that a sun-bath can precede or follow the swim.

Should you be attacked by cramp, hobble ashore immediately; if in deep water turn on to the back and swim to land by some form of back-stroke, massaging, if possible, the cramped limb. In either case it is well to call for another bather to accompany you.

If your fingers get numbed or white after or during a bathe, leave the water at once—you have already been in much too long. It may be advisable, especially if you are not sure of the soundness of your health or heart, to consult a doctor.

When taking a swim out from land be quite sure that you can accomplish the return. Remember that you will be more tired than on the outward swim.

Never go far from other bathers, unless you are accompanied by a boat or another swimmer. Even the most expert sometimes get into difficulties unexpectedly, and difficulties in deep water are not easily surmounted.

Do not pretend ever that you are in trouble when bathing, or try practical jokes of that nature. Should you hear a cry for help don't waste any time—providing that you are competent to bring a drowning person ashore. If you are not, and you try to help, there may be a double tragedy. There is an obvious moral to this—learn to swim, and to swim well.

Duck your head as soon as you are in the water, else you may get a chill. And if the sun is very hot dip your head frequently, or you may have a touch of sunstroke.

Don't wear a silly, elaborate costume for swimming. The plain, standard pattern is cheaper, less encumbering, and infinitely more attractive when wet.

Never dive unless you are quite sure that the water beneath is clear. If, for any reason, you must enter unknown water hurriedly, or from a height, it is always safest to jump feet-first.

Do not attempt to clamber into a boat over the side ; it is fairly safe by way of the bows, but better still by the stern—though take care that you do not injure yourself on the rudder hooks. When bathing in open water be careful, whilst floating, that you are not caught and drifted out by some unsuspected current. And, if you swim far out from the shore, beware that your return is not held up by a change of the tide.

Practise using a life-belt when possible—both throwing it from land and seizing it when in the water.

Swimming Movements

THE expert swimmer has often little notion of how extensive and complex is the knowledge which he possesses. He has gained this knowledge through long years of experience and so has forgotten many of the elementary stages. He is perfectly at ease in the water because the correct movements have become instinctive. But the gaining of this ease is a toilsome business if one has not a thorough understanding at the start of precisely what difficulties there are to be overcome.

The whole realm of swimming is vast. In includes, for instance, nearly ten different strokes, the sphere of life-saving methods, the wide region of fancy swimming, and the twin-realm of diving.

For the aspiring swimmer to have these classified in his mind is for him to have gone some way towards their mastery.

The expert swimmer is not flurried by chance collisions; he is not constantly spluttering and gasping; he does not frequently require to leave the water for rest, in short—his whole behaviour in the water is natural and free.

While the strokes and the life-saving methods give efficiency and power, it is chiefly from fancy swimming that watermanship comes.

Besides the strokes there are a number of fundamental swimming movements. The skilled swimmer, for example, can remain vertically in the water, with scarcely conscious effort; he can move backwards or forwards with but the motion of a limb; he can sink or rise at will; his limbs seem instinctively to perform the necessary action to turn or adjust his body to any position he may desire.

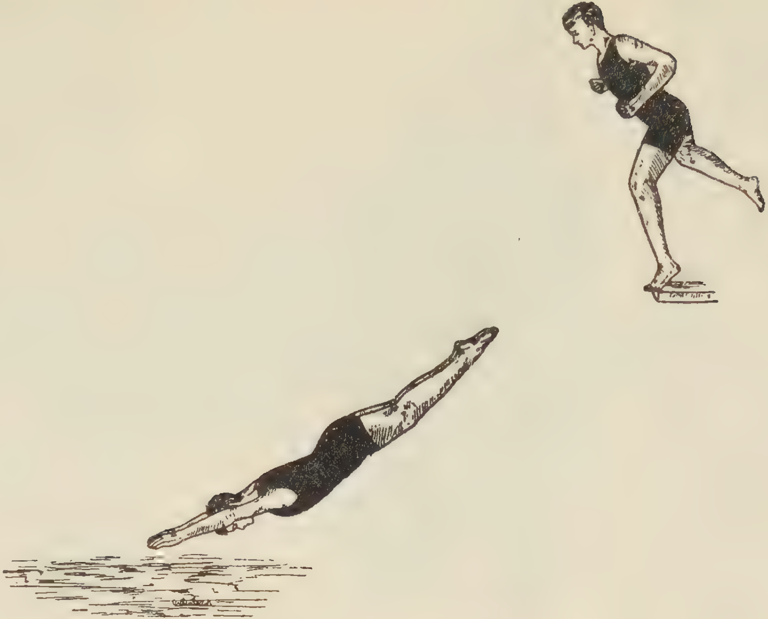
In the following section such of these swimming movements are described as cannot properly be dealt with under any other headings of the book.

All these things should be learned as soon as possible, preferably simultaneously with the early strokes, and certainly before any fancy swimming is attempted.

The result of a mastery of these swimming movements will be an ease and confidence in the water such as was not experienced before.

DOG-PADDLING

One of the easiest forms of swimming is the dog-paddle. It can scarcely be called a stroke, for it is neither practicable nor desirable for long distances. Yet it is often useful, and it helps much towards giving that ease in the water which is always the characteristic of the expert. Dog-paddling can be best understood by thinking of the action of crawling on the floor—in which the movements are almost identical. In dog-paddling, however, each hand is thrust alternatively forward just beneath the surface of the water. The cupped hand is then drawn downward and backward, as if pulling the water beneath the body. This results in the head being kept clear of the surface and in steady progress being made through the water. The legs, which are bent at the knees, work exactly as in crawling, progress being helped by the thrust of the soles of the feet. In this thrust, of course, the feet must be squarely at right-angles to the legs ; but, obviously, if they were drawn back in the same position. the resistance of the instep would negative the benefit of the previous movement. To obviate this, when the legs are being drawn up, the feet should be bent back, so that



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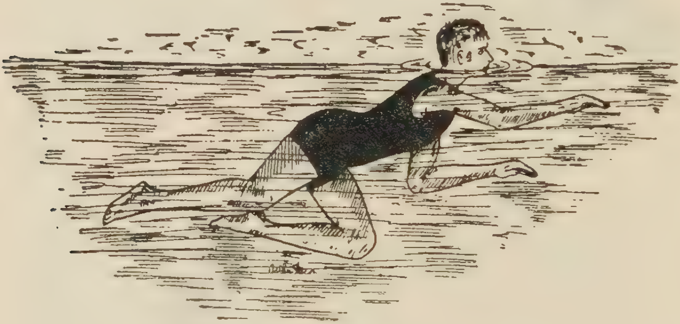
each forms a straight line with the leg. Then, during the kick they will be bent square again.

The loose ankle-action that will thus be gained is of utmost importance for many other kinds of swimming.

In the dog-paddle, as in all swimming, positive movements—which either propel or support—must be made vigorously; but negative movements—which do neither of these things—must be gentle, without energy.



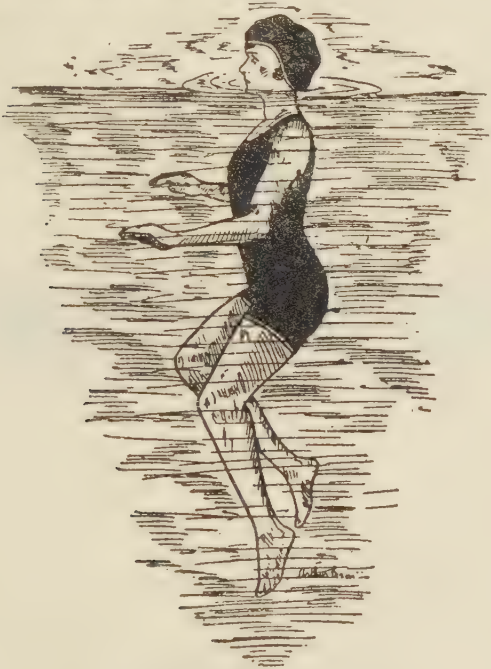
Dog-Paddling

TREADING WATER

Treading water is one of the most valuable accomplishments of a swimmer. By means of it you can stay vertically in the water with the head well clear of the surface, and in this position talk or lounge as easily as on land. There are several methods of treading water, but in each of them the arms perform about the same action. They are held, bent, in front of the body, and here they scull gently to and fro—the hands, of course, being cupped.

For stationary treading water the hands remain fairly flat, aiming only to support the body. But should progress in any direction be desired, the sculling thrust will be changed so as to propel the body in that direction: this matter of sculling is dealt with in a later section.

The most common method of using the legs is in an ordinary breast-stroke kick, performed vertically. The legs, however, do not draw up so widely as in real breast-stroke swimming, and the action is rather more rapid. Arms and legs work quite independently.



Treading Water

In the other method of treading water the legs are used much in the same fashion as when running up a flight of stairs.

There is one splendid way in which the leg action in treading water can be developed—that is by holding the arms out of the water, right above the head, as for a dive. In the first attempts, the raising of the arms above the surface invariably causes the swimmer to sink, but when some skill has been obtained it will be possible for the head to remain just as steady above water as if the arms were submerged and working.

SCULLING

Sculling is one of the most useful of swimming movements, and one which, apparently, uses up less energy than any other form of swimming. By means of it, the body can be driven in almost any direction.

Sculling

The hands alone are used in sculling. It is best begun from the horizontal-floating position.

Lie on your back with your hands by your sides, the body, of course, being straight but not rigid. Then, with the cupped hands, make a scooping movement, scooping the water towards the feet—to do this the hands must move outwards, downwards, forwards, and upwards. The forearms should move as little as possible, though it will be found that a slight sinuous motion is imparted to them by the sculling-thrusts. The wrists, however, should at no time be more than a few inches from the sides of the body.

When this sculling is performed with proper accuracy and force the body will be driven head-foremost. By reversing the sculling action you can progress feet-first, though not quite so easily : in this method the water will be scooped up towards the armpits.

By sculling, from this same position, using only one hand, the body will be driven round in a small circle, and if, at the point where the circle is completed, the opposite hand takes up the movement, allowing the first one to rest, then a circle in the opposite direction will be described, thus completing a neat figure eight.

But this sculling need not be used merely as a method of propulsion. If it is performed gently, and with a downward instead of a horizontal thrust, then the body will be retained on the surface with the minimum of effort. It is, for instance, a most luxurious method of resting and one which can be practised by everyone irrespective of any floating ability, to keep up in this same fashion having the legs comfortably crossed and the hands held well down beneath the back.

The sculling thrust must be used on almost every occasion when you desire to turn or change your position in deep water. Each hand must become thoroughly accustomed to this propellor-like action, so that instinctively it swirls round in the requisite direction whenever the need arises.

LEG-FLUTTERING

One of the most delightful forms of back-swimming can best be described as leg-fluttering. It is not a stroke, though it can be used, like the dog-paddle, over short distances. No other style of back-swimming is so useful for giving elegance and ease. It is practised comparatively rarely, but the swimmer who would become distinctive will do well to give much time to it.

The position for leg-fluttering is that assumed for all back-swimming, and particularly for horizontal floating —the body should be right on the surface.

The arms may be held in varying positions. Best of all they may be stretched beyond the head, as in floating horizontally. But when beginning this leg-fluttering it is less difficult to hold the arms as for simple back-swimming—the hands either on the hips, folded across the chest, or held beneath the back.

The legs work alternately. Above the knees they do not move at all, at first. Each leg in turn is dropped a few inches beneath the surface of the water—never more than six—and then swirled upwards again—it must not, however, break above the surface. If the knees are held together this constant passing and repassing of the legs will drive the body along head-foremost at a fairly good pace. The feet, of course, should be pressed down in line with the fronts of the legs, otherwise the toes would protrude into the air at each upward flick. As skill is gained, the flutter will be performed with increasing speed. The greater the speed of the leg movement the shallower the movement will become, so that in a perfect flutter the legs open but a few inches, and the whole length of each leg thus comes to have a graceful, sinuous motion. It is only in this perfect flutter that the knees should move up and down very slightly.

There should be no splash of any sort in leg-fluttering —in fact, the onlooker is frequently puzzled to know exactly how the swift progress of the swimmer is being achieved.

After some practise the complete horizontal-floating position should be assumed, with the arms extended past the head.

You can now experiment by working one leg more strongly than the other, and thus swerving your course to either side. Figures of eight can be performed in the same fashion as those described in the "Sculling" section.

But to make a turn it will now be necessary to bend the whole body to one side ; the hands, palms upwards, will, of course, point in that direction in which you desire to go.

TURNING

Turning is a thing which it is worth the while of most novices to practise. It sounds a very simple matter, but beginners waste a vast amount of energy over it.

It is obvious, for instance, that a breast-stroke swimmer who desires to turn so that he faces in the opposite direction can only need to use the ordinary strokes of one arm for the process—since his arms each have contrary effects. Yet many swimmers use the full action of both arms for a turn, with the result that they describe a semi-circle with a radius of several yards. If only the one arm is used the body should swing as on a pivot.

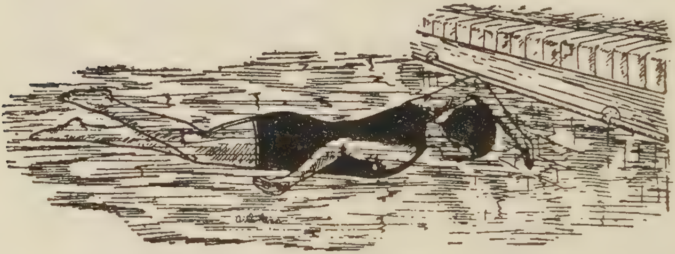
A turn is often accomplished merely by a twist or fling of the body, though with an expert this would usually be assisted by some sculling-thrust.

Twisting swiftly and neatly from back to breast, and vice versa, should be practised.

All these abilities go to make up the great quality of watermanship.

A bath swimmer often requires to turn round on reaching the end of the bathing pool, without interfering with the course of his swim. For example—a bath swimmer who sets out to do a half-mile in a twenty-two yard bath will require to make thirty-nine turns, and unless they can be properly performed a great deal of time and energy will be wasted.

The turn in a bath should be effected thus. Supposing you approach the wall by either breast, or any stroke swum on the breast, and intend to make a turn to the left. As you near the wall you take a breath and depress your head. Your right hand will be extended to the front, so that it reaches the wall about a foot or two below the surface, pointing downwards. The impetus of your movement will carry your body onwards, and you will draw yourself up, to the right, so that you arrive against the wall with the entire right side of your body, your knees being borne right under to your chin. Your left hand now makes a quick stroke which must swing round your feet so that they can be pressed against the wall ; and this movement will have turned your body—aided by a thrust from the right hand which has, until now, been against the wall—so that you are turned completely round, head pointing in the direction in which you desire to go. Your body is still doubled up. Thrust your arms, together, out beyond the head, in a diving position ; at the same time pushing off vigorously from the wall by straightening the legs. You will get a fine glide for several yards—exactly as you glide in a plunge. If you are in special haste you may perform a flutter movement with your legs during this glide, until you are again ready, with head above surface, to resume your original swim.



Turning in a Bath

Throughout this turning process you will have remained as flat as possible at the surface of the water, or just beneath it.

Floating

SOME people float easily, some do not—it is largely a matter of build and bones. But floating is such an extremely useful accomplishment that it should be practised assiduously by every swimmer.

There are two styles—horizontal, and perpendicular floating. I will describe them in this order.

Your first attempts will already have been made if you have followed the instructions of the "confidence work".

Horizontal Floating

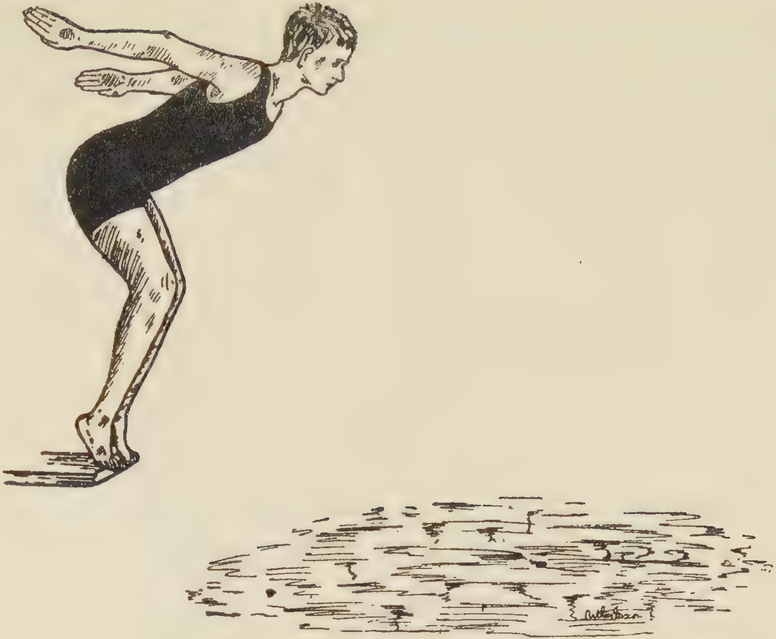
A friend may assist you in early trials.

The secret of floating has chiefly to do with chest expansion and air retention.

The best way to appreciate the problem of floating is to consider it as a matter of balance—the chest is the floating centre of the body, the problem is thus to balance the legs by the head and arms.

The body must lie on the surface of the water, arms and legs straight and in line with each other. Do not hollow the back too much, at first. You will be careful not to breathe too deeply or to exhale too thoroughly—or this excessive disturbance of your buoyancy will cause you to sink. If you are a man it will soon be apparent that your chief difficulty lies in keeping your feet at the surface—a woman's feet usually keep up easily. If one end of a seesaw persists in remaining down the simple remedy is to remove its weight nearer the fulcrum. This may be done by the floater, if he spreads his legs apart. Should the feet, however, still refuse to remain up then more weight must be put at the other end of the seesaw—in other words, the hands must be made heavier or less ready to float. This can be achieved

Perpendicular Floating



Start of a Plunge. (*See page* 137)

by bending the fingers upward, out of the water, or turning the palms edgeways, or clenching the fists ; the head, too, may be strained farther back.

It often happens that the swimmer, essaying to float, finds after a few seconds that his mouth sinks beneath the surface—and he immediately abandons his trial in wild panic, convinced that he has failed. This is an unfortunate mistake, for were he but to hang on for a moment or two his mouth would again rise above the surface, and he would be successfully floating.

A person with plenty of flesh can float easily in fresh water ; some slightly-built people never succeed in remaining horizontal. But in salt water almost anyone can float, particularly if the limbs be spread to form a letter X.

Some swimmers, in the sea, are able to lie horizontally with legs crossed and hands clasped beneath the neck—as if they were reclining luxuriously on a feather bed.

Perpendicular floating is easy to understand, and not very difficult to accomplish.

The usual method is for the arms, palms downward, to be stretched out at the sides of the body, pressed backward so that the chest is opened to its fullest capacity.

The head is leaned back until the ears are immersed ; only the mouth and nose in fact should be above the surface, though the eyes may be just clear of the water.

The legs then hang limply downward.

Surface-Diving

To dive from the surface to shadowy deeps ;
With wide-opened eyes taking curious peeps
Where Neptune his mystical palaces keeps—
'Tis glorious to be a swimmer !

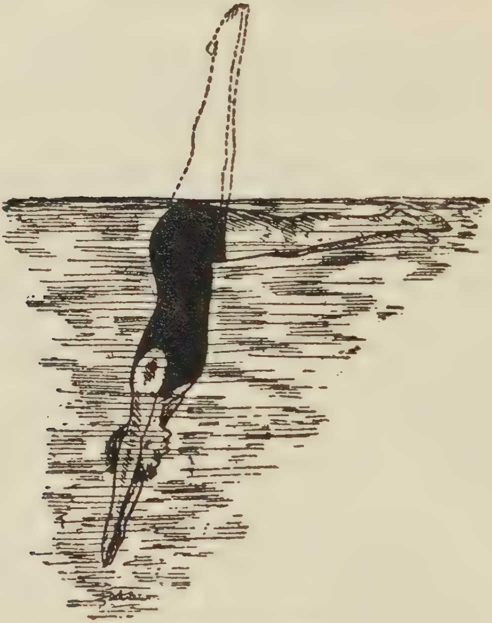
A SWIMMER who desires to descend six or eight or ten feet from the surface of the water should not have to make any violent exertions to get down ; neither should he swim down. A surface-dive, properly performed, will take him to any such depth with the expenditure of scarcely any energy. The surface-dive, too, will be extremely graceful—one of the most pleasing movements that any swimmer can perform.

Surface-diving should be practised simultaneously with elementary swimming, for it is not at all difficult. You had best begin by trying to reach the bottom of five feet of water.

Swim by means of breast-stroke, taking slow, deep breaths to prepare your lungs. When you are quite ready take one final breath, and depress the head beneath the surface. The arms will now make a breast-stroke pull, upward, towards the surface : this will result in the trunk being bent downwards at right-angles to the surface, the arms meanwhile extending rapidly until they are beyond the head, in the position always assumed for a plain dive, with thumbs hooked and palms flat. The body is now in the form of a carpenter's foot-rule bent at the middle, each half being quite straight—the legs lying along the surface, and the trunk and arms pointing downwards.

The body is now straightened—that is, the legs are raised into the air, with insteps pressed back in line with the shins, until the "foot-rule" is once more straight. The weight of the legs, which should be out of the water to the thighs, will cause the body to shoot downwards.

The depth of the dive will depend on the steepness of the angle reached—to descend five feet the angle may be as flat as that taken in an ordinary header from a take-off about a yard high.



Surface-Diving

To go down eight or ten feet you will need to descend more perpendicularly.

In all surface-dives steering will be affected by the flat hands, just as in the latter part of any ordinary dive ;

the hands will also prevent the head from colliding with the bottom.

Eyes should always be open.

If it is not desired to swim about the bottom the return to the surface may be achieved by the original impetus of the dive, the head being thrown upwards and the hands tilted towards the surface. If this sort of dive is to be perfect the legs must not lose their position, but remain straight and together throughout.

The chief difficulty in surface-diving is to get a clean start. If the legs are thrown up too violently it sometimes happens that the diver topples right over on to his back—and gets exceedingly confused. The dive is similarly spoiled if the legs are not kept exactly together when in the air, for in this case the diver, instead of descending perpendicularly, lurches most ungracefully on to one side. If the feet are not properly pointed the elegance of the dive is lost.

Life-Saving

LIFE-SAVING is one of the most fascinating branches of swimming, and every swimmer should begin to make a study of it as soon as he can cover about one hundred yards by both breast- and back-stroke.

The most valuable qualification for life-saving is thorough, all-round swimming, and particularly the ability to "feel at home in the water" under any circumstances.

A swimmer should be able to take care of himself before attempting to rescue others.

People are often drowned through unability to swim when fully dressed, and to be able to get rid of one's clothes when in deep water is an accomplishment of very practical use. Of course, when rescuing another person it will rarely be necessary to undress in the water, but the exercise will be excellent preparation for life-saving proper. Clothes are buoyant on first being immersed, but as the air escapes they become dangerously cumbersome.

UNDRESSING IN THE WATER

The processes by which clothes are removed in the water can very helpfully be practised on land.

Stand with the feet about a yard from a wall; then lean back until the head rests against the wall. The body must be kept arched. This position resembles that of the body in the water whilst the jacket, shoes, and socks are being removed; and the removal of these garments can now be practised, care being taken that they are not brought in front of the body—which would be out of the water.

To practise the removal of shirt, trousers, or other undergarments, lie flat on your back on a table or bed, and in this position remove them. Particularly avoid raising the head or disturbing the body more than is absolutely necessary.

In this land practise the methods used will resemble as nearly as possible those used in the water.

I need only describe the latter.

Begin with the shoes, for these are heaviest.

Float or swim on the back, in proper horizontal position. Then bend the left foot under the body and reach under with your right hand until the shoe can be unlaced. Meanwhile, keep afloat by gently paddling with the right foot and left arm. When the shoe is unfastened, straighten the leg again and push off the shoe with the right foot. By reversing the process the other shoe can be removed.

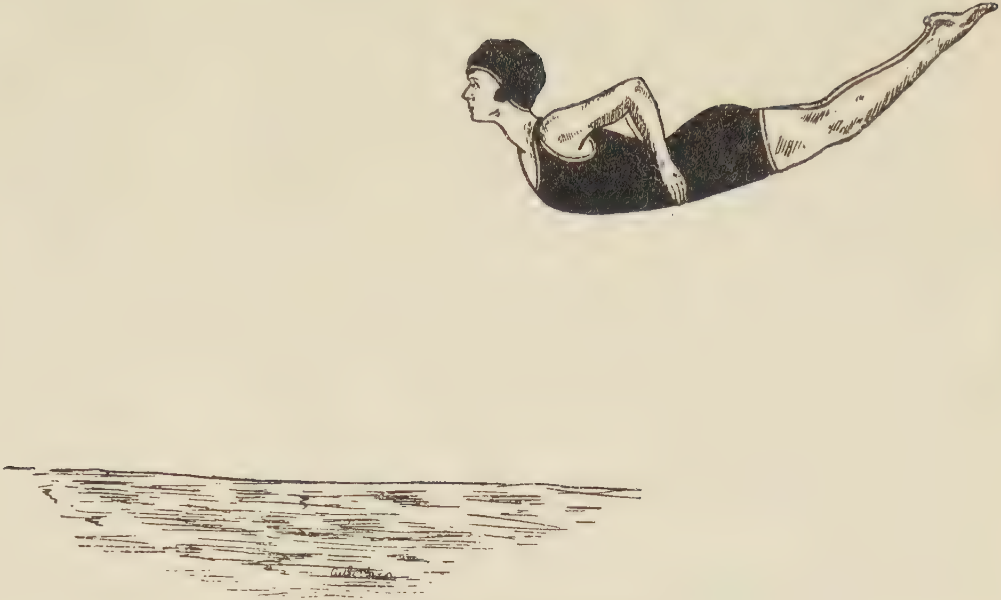
You may get rid of socks or stockings in exactly similar fashion. The coat or jacket should be attended to next.

Float on the back, or swim gently, using the legs only. By squirming the shoulders and tugging at the ends of the sleeves the coat will be made to drop beneath the back and slide down the arms, and so over the wrists.

A waistcoat would be similarly treated.

Trousers are rather more troublesome.

Swim as before, on the back. Having unfastened the braces, work the trousers down to the knees. Then swim out of them, gently fluttering the legs and using sculling motions of the hands. Do not get nervous when the trousers are about your ankles—gentle, unhurried efforts will soon get them free. Should there, however, be any particular difficulty in getting the feet clear, one hand may be reached under, as for the unlacing of the shoe, but this is scarcely ever necessary.



Swallow Dive. (*See page* 140)

A skirt would be treated in the same manner, though it would give less trouble.

Then the shirt—or any such loose article of clothing!

This is usually worst of all. First take care that every button is unfastened. Swim, still on the back, keeping very flat on the water. The shirt must first be pulled up round the shoulders. Then, taking a good breath, jerk it right up over the head. The arms will now be extended beyond the head, as in a horizontal-floating position. To work the shirt right along and so off the wrists is comparatively simple. Or, alternately, when the shirt has been snatched over the head by one hand reaching behind the neck, the arms may be brought down in front of the body, while you tread water.

The ability to perform this undressing in the water will improve rapidly after just two or three attempts.

Remember to practise first on land. When in the water, take things quietly. Do not get flurried; think just how you are going to remove each garment; and, if desired, swim a little between efforts, so as to rest.

Undressing, of course, must always be practised in deep water.

It is a good plan to keep an old set of clothes for swimming and undressing practise. After your swim, when you have let each garment drop from your hands and sink, you may have excellent surface-diving practice in recovering them.

WEEDS

To get entangled in weeds, when swimming, is a terrifying experience unless you know just what to do. It is dangerous to attempt to struggle free, or to swim through by any of the ordinary six strokes—such an attempt would only result in more certain disaster. The only way is to swim gently on, with the stream, by the method called dog-paddling.

LAND DRILLS

The most common methods of release from the clutch of a drowning person, and of rescue, can be helpfully practised by means of land drills. The drill here described are, in an abbreviated form, the system devised by the Royal Life Saving Society. For fuller details the hand-book of the Society should be obtained, post free 1s. 3d., from 8 Bayley Street, London, W.C.1.

For all the drills the two learners should stand about a yard apart, facing each other. I have called the Rescuer R, and the Drowning person D; and, for convenience, made them both males.

METHOD OF RELEASE WHEN WRISTS ARE SEIZED:

One—R raises his hands to the level of his shoulders, by bending his forearms upwards in front of him. His wrists are gripped by D, fingers out, thumbs in.

Two—R steps back a short pace and thrusts his arms forward and upward, D keeping his grip.

Three—R swings his arms down to the level of his hips, then outwards against the thumbs of D, whose hold is thus broken.

WHEN THE RESCUER IS CLUTCHED ROUND THE NECK:

One—D clasps his hands round R's neck, keeping his arms fully stretched, fingers interlaced.

Two—R places his left hand in the small of D's back. His right hand is passed over D's left arm, the palm of the hand resting under D's chin and the fingers pinching his nose.

Three—R pulls with the left hand and pushes with the right, and thus breaks free.

WHEN THE RESCUER IS CLUTCHED ROUND THE BODY:

One—D clasps R round the body, outside his arms.

Two—R places his left hand on the right shoulder of D and, with the right hand, catches the nose and chin as in the previous method. R also places his knee high up against the abdomen of D.

Three—R leans forward and, with a sudden push against D's chin and abdomen, compels him to release his grip.

There are five methods of rescue, by which a drowning person may be towed to safety.

FIRST METHOD. FOR TOWING AN INSENSIBLE PERSON, THE RESCUER SWIMMING BACK-STROKE:

One—R grips D's arms just above the elbows and, pushing with the right hand, pulling with the left, turns D round so that he faces the same way as R. R must on no account completely lose hold of D during this movement. It will thus be necessary, at the instant when D is half-way round, for R to grip D's right elbow with his right hand before taking away his left.

Two—R slides his hands up and places them one on either side of D's face so that the palms cover D's ears. Both lean backward.

SECOND METHOD. FOR TOWING A STRUGGLING PERSON:

One—exactly as in the first method.

Two—R smartly reverses his grip of D's arms so that his thumbs are outside. At the same time R, with elbows bent in near to his chest, raises D's elbows outwards, and leans backwards.

THIRD METHOD. WHEN D'S ARMS CANNOT BE HELD:

One—as in the last method.

Two—R thrusts his arms right through beneath the armpits of D, and places his hand, with fingers spread over D's chest, his thumbs on D's shoulder joints. At the same time R raises his elbows and holds D tightly against his chest, leaning backwards.

FOURTH METHOD. FOR TOWING A PERSON WHO IS CALM AND OBEDIENT :

One—D raises his arms, keeping them straight, and places his hand on R's shoulders, leaning his own head back.

Two—R goes through the breast-stroke arm action.

FIFTH METHOD. WHEN THE RESCUER SWIMS ON HIS SIDE :

One—as in the first three rescues.

Two—R slides his left arm over D's left shoulder, reaching his fingers beneath D's right armpit, and keeping his left hip in the middle on D's back.

All of these land drills should be practised, the numbers being counted aloud, until they can be performed swiftly and neatly.

WHAT HAPPENS IN AN EMERGENCY

Supposing you are walking by a river, when you see a boat overturn and its non-swimming occupants thrown into the water !

It is well to understand what must normally happen in such an emergency so that you may be clearly aware of the qualifications necessary to the swimmer who wishes to be able to save life.

First—you would plunge in and sprint to the spot. Whether or not you first fling off some of your clothes would depend on the distance to the drowning person. Usually the few seconds spent in getting rid of shoes and coat are more than gained in the speed of the ensuing swim.

Second—if the drowning person has sunk you will make a surface-dive and bring him up again. If he is on the surface you may be clutched by him and it will then be necessary to get free. The safest way to approach a drowning person is from behind, but if he is able to see you coming you may inspire confidence.

Third—you must tow him ashore, the method used being dependent on his condition—he may be calm, violent, or unconscious.

Fourth—when he is on land you will give him such treatment as may be necessary—artificial respiration if he is unconscious.

SAFETY FROM THE CLUTCH OF A DROWNING PERSON

A drowning person is temporarily insane through fear. Thus he will not consider at all that he is both spoiling his own chance of life and endangering yours, when he gets hold of you. You will, of course, try to avoid being clutched, but, if you are so unfortunate as to be grasped, then you must have no hesitation in using whatever means are necessary to free yourself.

One excellent way in which you can often fend off the dangerous approach of a drowning person is by drawing up your feet in front of you and pushing him away. You may even, in this way, succeed in turning him round, so that his back is towards you, if you place your feet on his hips or chest. And if you can seize him from behind you can readily master and tow him.

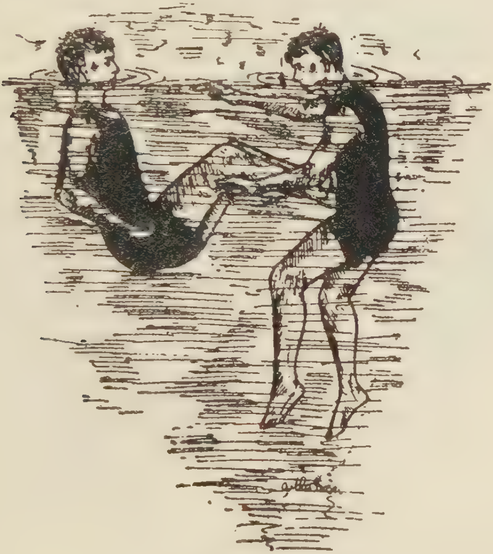
Should you, however, be gripped, you have one great advantage over him—you may calmly use your knowledge of the water to gain the upper hand.

Supposing you are grasped from behind, with his arms tightly around you—he will probably twine his legs, too, about your own, for the drowning person usually tries to climb up out of the water if he can get hold of anything, and he will try to use you as if you were a pole.

You must immediately get on to your back and swim as fast as you can above him, so that your own mouth is clear of the surface. The other person, being underneath, will choke and loosen his hold.

It will be clear that if you are to achieve success in this last instance you must be an expert back-swimmer, for probably the only movement you will be able to effect will be a slight leg-flutter and some sculling action of the hands.

You should practise this release, and all the others, in deep water, with a friend, very frequently. But in all such practise your companion must forget that he is an expert swimmer, and must act as a desperate, drowning person—clinging to you until he has no breath remaining or until he is otherwise forced to loose his hold.

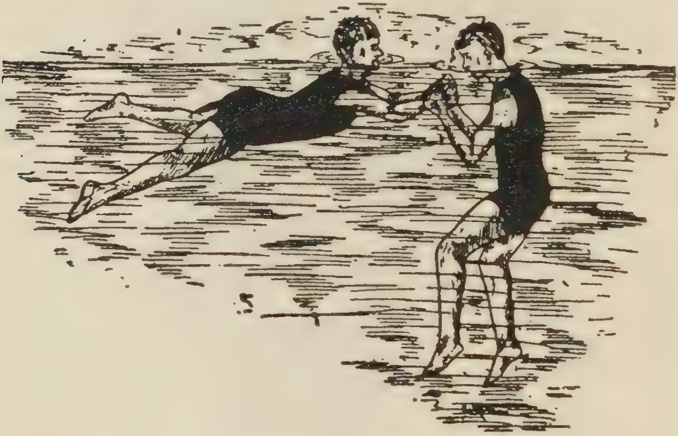


Avoiding Being Clutched

If you should have one of your wrists gripped you may usually get free by placing a foot against the drowning person's chest, and thrusting him away.

Probably the most dangerous of all grips is the stranglehold from behind, in which one or two arms pass, throttlingly, around your throat. In this emergency you must grasp one finger of each of the other's hand, and by dragging back on those fingers the grips will be weakened so that you will be able to escape the immediate danger by turning inwards.

Should you be gripped from behind round the arms, turn on your back and swim over the top of your assailant until his hold loosens.



Breaking a Wrist-Hold

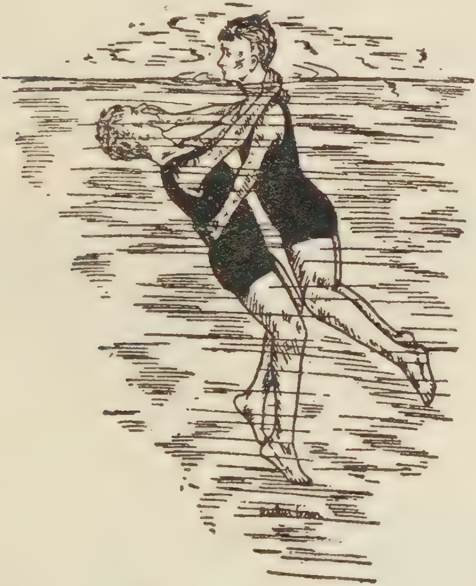
The other most useful methods of release have already been dealt with in the land drill.

In the first method the rescuer treads water. Usually the wrists are most liable to be clutched in this fashion when the rescuer approaches the drowning person by breast-stroke. In the second method the pinching of the drowning person's nose is to compel him to open his mouth to breathe, and he will thus swallow some water which will of itself probably make him loose his hold.

In every release the rescuer must take care to keep uppermost.

In the third release the drowning one will be pushed right beneath the surface, and usually the subsequent choking will cause the desirable loosening of his grip.

The crisis in the water is no time for squeamishness.



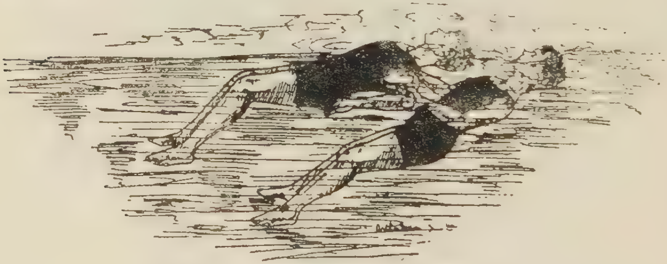
Breaking a Neck-Hold

If you are seized when about to attempt a rescue you must at all costs free yourself or a double tragedy will result.

Supposing a powerful man is drowning, and struggling violently—a rescuer of lesser physique might possibly be well advised to let the man grow a little quieter before taking hold of him.

METHODS OF TOWING

In the first three methods of rescue the legs only can be used—but this style of back-swimming is, of course, quite easy. As far as possible an ideal back-stroke should be used, but in practice a perfect position will not be practicable because of the interference of the drowning person's body which is above the rescuer. As the rescuer's body, instead of being horizontal, will lie at an angle approaching forty-five degrees, the rescuer will have more than ordinary difficulty in keeping afloat. He will be compelled to use a faster kick, and the gliding-pause, movement number *four*, will be almost unavoidably omitted.



The Commonest Rescue Method

The rescuer's chief concern is always to keep above water the head of the drowning man.

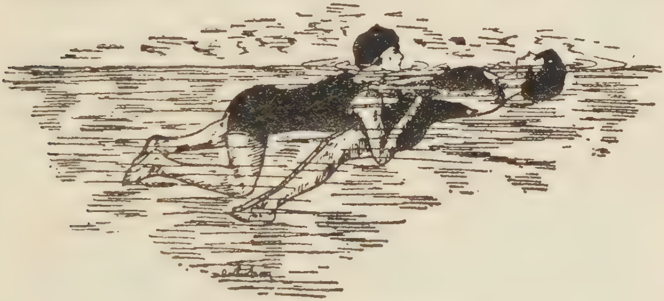
In the first three rescue methods—where the rescuer swims on his back, the difficulty frequently occurs that the drowning person's legs sink so as to interfere with the swimmer's kick. If this should happen the rescuer may jerk his knee up into the lower part of the other's back—this usually causes the troublesome legs to straighten, besides pushing them up to the surface.

In the first rescue method take care that your fingers, when holding the other's face, do not get beneath his chin so as to interfere with his breathing. Your elbows should remain close to your sides, and sharply bent.

If the second method is properly performed the drowning person will be unable to break free from the grip of his rescuer. In practising this with a companion, allow him to exert his utmost power to wrench himself from your hold ; you, meantime, will swim steadily on towards the shore. This method of towing is the one of most common use.

The third method should only be resorted to when absolutely necessary. The drowning person is held flat on the rescuer's chest—a very hampering position.

The fourth method can commonly be used when an experienced swimmer is to be brought to land—as with cramp. You are able to swim by an ordinary breast-stroke. The drowning person, who must be quite calm and obedient, floats on his back, supporting himself by raising his hands in front of him and placing them on either side of your neck. His arms must be absolutely rigid ; and by pressing downwards on your shoulders he floats his legs up beneath your stomach. His chest should protrude on the surface, touching your chin, and you then push him before you.



Fourth Rescue Method

The fifth method is for the rescuer who prefers to swim side-stroke. The drowning one is kept on the surface, the small of his back resting on the hip of his rescuer.

SURFACE-DIVING

Often a rescuer has need to recover an insensible body from the bottom of the water. Before a dive is made the body must be located. In still water this is not difficult—providing that the drowning person has only just sunk, for air bubbles will be rising from the spot. In running water, however, it is more troublesome. The bubbles will then be carried down-stream as they rise, and allowance must be made for this drift. Allowance, too, must be made for the rescuer's own drift as he makes his surface-dive. Consequently the dive would be made in the line of the bubbles, but considerably up-stream.

When the body is reached the arms should be gripped. Then the rescuer must get one knee under the other's back and push upwards from the bottom, arriving at the surface in the position required for the rescue method which will be adopted.

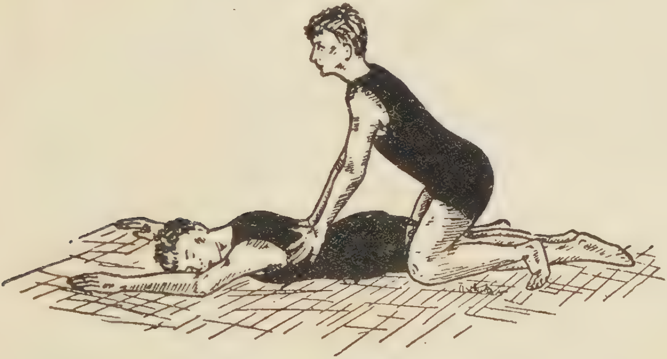
LANDING

When you have brought a drowning person to land, in deep water, there need be no difficulty in getting him ashore. Slide your right arm, from behind, beneath his right armpit and pass your hand round his chest until you can hook your fingers beneath his opposite arm. Then swing round so that you look towards the land and clutch the bank or landing stage with your left hand. You have then merely to swing him round in front of you and you will be able to hoist him into safety.

ARTIFICIAL RESPIRATION

If a person is brought ashore insensible, artificial respiration should straightway be commenced, without waiting for the doctor to arrive. The best system is the

"Schäfer". To perform this the patient must be laid face downwards on the ground head turned to one side and arms around it. The rescuer kneels astride or at one side of the body, placing his hands in the small of the back so that the thumbs lie parallel, about an inch apart, and the fingers extend over the lower ribs. He then leans forwards on his arms, which must remain straight, until his whole weight is on the patient, whose chest is thus compressed and emptied of air. Then the rescuer swings back, releasing his pressure though not moving his hands. This results in the patient's chest springing open and drawing in the air. This slow pressure and quick release should be continued steadily at the rate of twelve to fifteen times a minute.



Artificial Respiration

Artificial respiration should be kept up until the patient is able to breathe naturally, or until a doctor declares it useless. In many cases a life has been saved after several hours' persistence.

While artificial respiration is being practised other helpers may assist—if they can do so without interfering—by applying hot flannels to the limbs and body, and hot bottles to the feet. But no attempt must be made to remove clothes or give any liquids by the mouth until normal breathing is restored.

When natural respiration is effected, treatment for promoting warmth and circulation should be applied. This should consist of friction over the surface of the body and limbs, towards the heart.

Sea Bathing

To climb and to swoop ; to plunge and to drift,
When billows are frothy, and lofty, and swift ;
To feel the great thrill at the long breaker's lift—
'Tis glorious to be a swimmer !

EVERY normal adult, except the unfortunate in whom romance and laughter have died, ardently wishes, now and again, to spin a top or do something similarly juvenile and preposterous. We all of us rebel sometimes against the dictum : "When I became a man I put away childish things".

The Latin countries have their outlet for this tenacious youthful exuberance in Carnival time when, secure under a domino, an ordinarily staid citizen may be as outrageously frolicsome as he chooses. The English man or woman is denied this happiness. The snows of Europe's playground give liberty to the few ; but beyond an occasional romp in the nursery there is but one Elysium where we may be our natural selves, untrammelled of conventions, uncaring of anything save pure, spontaneous fun.

And that Elysium is the sea's edge.

When bathing in the sea you may shriek and splash and be just as boisterous as you choose. You could not, for instance, when at home, in the street outside your house, stand on your head ; or shout at the top of your voice ; or prance around like a frisking horse ; or overturn your neighbour by suddenly snatching at his legs. But all these things may be done in the sea and no one will frown on you—in fact, the more Peter Pannish you are the more popular you will be.

That is the great glory of sea bathing!

To get the fullest enjoyment of sea swimming its peculiar characteristics should be understood.

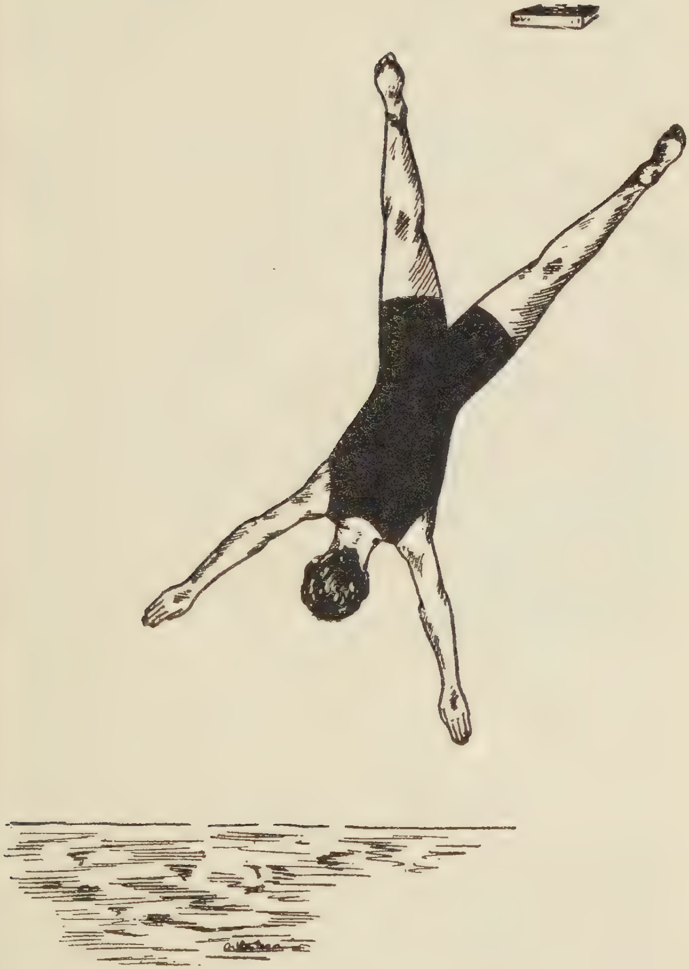
In sea water, for instance, the body is much more buoyant than in fresh. Thus, during a long swim, it is easy to rest by floating.

The most noticeable difference between sea bathing and a bathe in river, lake, or bath, is the waves—though, when you are learning to swim, you may feel tempted to say that the chief distinction is the taste.

Ordinary small wavelets on a calm day do not call for any special skill on the part of the bather; but when the water is rough the bather stands in some peril unless he has an understanding of how to behave amidst fair-sized and big waves.

The principal consideration is the manner in which you shall enter the water when it is very boisterous—though naturally on such days you would not swim unless you are an expert. Suppose a six-foot wave is swirling in towards the shore, and you are running down the beach to the water—how shall you encounter the wave? Well, if the wave is already curling at its crest and looks ready to topple forward it will be useless, and probably dangerous, to walk straight into the sea in an attempt to wade through or swim over the incoming mass of water. This would only result in you being hurled backwards, maybe with unpleasant results. The proper way would be to rush into the water and plunge beneath the wave, swimming through under it, deep down. So, when the wave breaks, you would be safely behind it, with your head once more clear of the surface. If you meet a white-crested, toppling wave when you are swimming right away from the shore you will treat it similarly.

In landing, too, when the sea is rough, you must be very careful. It is of no use attempting to swim straight



Butterfly Dive. (*See page* 144)

in without taking any account of the waves. This will only ensure that you get hurled unpreparedly on to the shore, with many bruises and injuries ; and, worst of all, you will be dragged back again by the fierce back-wash before you are able to get to your feet. The only safe way is to judge your approach so that you ride in on a big wave. You will swim hard all the while and, just as you are about to land high on the shore, you will bring your feet forward beneath you so that as you touch you can scramble up clear of the ebb—or you may cling tightly until the water has receded from you, and then spring away before the next wave arrives.

One of the most delightful things in sea bathing is floating—anyone can do it lying spreadeagle fashion, in the shape of a letter X. Floating with feet out to sea is especially exhilarating, for then each wave tilts the legs up skywards, then raises the head as the feet drop, so that there is this constant rocking motion ; and for the more expert, who can float amidst a heavy swirl, there is the thrill of sliding down the back of a wave into the great trough behind.

The best months of the year for sea bathing—the water being usually at its highest temperature—are September and October.

Children Like Bathing

CHILDREN naturally like bathing, unless they have grown to have an antipathy for it through faulty training.

There are two common ways in which children are made to dislike bathing.

In more barbarous, unenlightened times it was a usual practice to toss a youngster, bathing for his first time, straight into deep water, with the idea that the fright might make him discover how to swim. He might just as reasonably have been dropped into a pit with a tiger and an unfamiliar gun, on the principle that he would soon discover how to shoot. Of course, the child never did learn that way, but he often received such a fearful fright that for the rest of his life he dreaded the water far too much ever to enter it again.

The other common error is to start immediately with very dull swimming lessons, so that the youngster comes to think that bathing is just synonymous with dreary and difficult drills.

But if neither fear nor boredom is evoked the child will learn to love bathing and consequently will very soon learn to swim.

The best plan, at the beginning, is to allow the youngsters absolute freedom, so that they may romp and splash and laugh just as they please. It may be that at first they will refuse to go into water more than an inch or two deep. Never mind, confidence must be acquired, it cannot be forced.

Children find still more enjoyment from bathing if accompanied by father and mother, and at the seaside these family bathes should be planned. The first few minutes should be spent in boisterous fun. Father, of course, must play the hero and be first in the water, and at any cost he must pretend that it is delightfully warm, so that he can complain when the others hesitate. Then, when all are in, a few minutes' scrambling and ducking will make everyone feel quite at home.

Baby should be allowed to jump and roll ; the other children can be encouraged to make "duck-dives" for pebbles or handfuls of sand, in water about waist deep—father may first show how to do this. Mother may try the more gentle exercise of floating.

When confidence in the water has been gained, everyone may try to emulate mother at floating. The easiest way is to divide the family up into pairs, so that each learner has a companion to give support and advice.

Quite probably it will not be wise for all the family to stay in the water for the same time. The slimmest members must be sent out first, and no one must get chilly.

"Just for enjoyment"—that should be the motto of the parents whose child is starting to bathe.

Women and Swimming

THE world was forcibly reminded that swimming is a sport in which women cannot only equal but excel men by the remarkable performances of the first two ladies to swim the Channel, in the summer of 1926.

But swimming prowess should not be measured solely, or even primarily, by times and distances. One does not say the world's finest dancer is that one who can waltz from London to York in the shortest time.

Swimming is an art, and the greatest swimmer is the greatest artist. Judged in this fashion, too, women again assert their pre-eminence. In grace and beauty of style the muscular, angular male can take but a fair second place.

And, happily, swimming is the perfect exercise for ensuring in a girl or woman beauty of form and supple charm.

Women have great advantage at the start. Their bodies are much more buoyant than those of men, largely because of their slighter bones. Consequently, floating and all preliminary work is made much easier.

But this advantage brings one danger. The man spends much thought and arduous labour in learning how to keep his feet from the bottom—they have a most annoying tendency to sink like an anchor whenever his vigilance is relaxed. Women, on the other hand, usually find that their feet float easily—will not, in fact, sink. Often the girl or woman bather, without much experience, finds herself in serious difficulties and even danger, in quite shallow water, merely because of this inability to bring her feet down to the bottom and so stand up. Her first practice must, therefore, always be to get her feet down immediately that she wishes to. The matter is quite simple when the method is understood. Supposing, from any position whatever, you wish to place your feet on the bottom. You must hold your breath ; draw your knees up to your chin ; strike hard against the water, taking care that you lift no arm above the surface ; and then you will be able to place your feet down without any difficulty.

Bathing should never be indulged in during, or immediately before, periods of menstruation.

After a bathe in the sea it is always desirable to rinse the face and hair, if possible the whole body, in soft water. The complexion will be benefited, too, if some good cream is well rubbed in, or some glycerine and cucumber lotion.

Training

FOR swimming, you must neither seek to reduce your weight nor harden your muscles. The person with plenty of flesh can better resist the cold and is more buoyant. And stiffened muscles are most liable to cramp.

If, then, you wish to train for some swimming event you must avoid all such things as tense the muscles. There must be no weight-lifting, running, cycling, rowing, nor any form of exercises with gripping devices.

The ideal modes of exercise for the swimmer are walking and Indian club swinging. Breathing, too, should have plenty of attention.

Regular daily walks should be taken, of about two miles.

Pastry, potatoes, and pork should altogether be avoided. So should tobacco.

Tea and coffee are not of much use, but cocoa, milk, fruit, and vegetables are excellent.

Not less than a month should be spent in preparing for a special event. Your daily work may consist of long swims and short sprints, alternately.

Never risk injury to your heart by sprinting at the end of a long swim.

Style

THE difference between a good swimmer and an indifferent one is, in appearance, akin to that between a puffing paddle-steamer and a smoothly-gliding canoe.

You should aim always at making your swimming beautiful. Good style will not come by chance, it is the result of care and close study. The perfect swimmer, who appears to do everything so easily, was not born that way ; that superb art has only been gained by patient effort.

Good style is usually dependent on seeming trifles. It is the little things that the mediocre swimmer forgets that make up his mediocrity—the separated fingers ; the irregular, noisy breathing ; the angular limbs ; the stiff ankles ; and the facial contortions.

Every part of a stroke should be flawlessly performed, there should be no blurring together of movements. The body should always lie flat and undisturbed.

Many swimmers observe a peculiar foot movement on the part of the expert, but comparatively few ever succeed in analysing exactly what this is. This "looseness" of the foot always characterizes the stylish performance of either of the first four strokes.

In breast-stroke, for instance, when the leg is being drawn up, the foot should be pointed so that the instep offers no resistance to the water. During the kick the foot becomes square so that the sole presses with fullest effect against the water. And during the movement number *three*, the foot changes from the square to the pointed position—thus an extra thrust at the water is made by the sole, and the instep is properly straightened before the ensuing glide and recovery.

Precisely the same details apply to the frog-kick in back-swimming.

In side-stroke and overarm the foot movement is less marked, but a supple ankle is still of importance. The foot movement is not so direct. As each leg recovers, its foot must hang so limply that it swings into the line of least resistance—that is all, but it is important. This relaxation must be changed to firm control as the legs make their closing kick.

Nothing more develops good style than constant practise of the swimming movements, described elsewhere, and of the more graceful feats of fancy swimming.

Water-Polo

AN American writer has said: "Water polo is a game for men with hearts of the grizzly bear. I was going to say lion-hearted men, but a lion hasn't nearly as strong a heart as a grizzly bear, and the men who play water-polo are really playing the most strenuous game yet invented by man."

I have put that sentence first because non-swimmers who have never seen a polo match are sometimes inclined to scoff when they learn that the period of actual play in a polo game is only fourteen minutes—but, as every experienced swimmer knows, that is quite long enough! The duration of a game is much more than fourteen minutes, for when the ball is "out of play" for any reason whatever, that time is not reckoned in.

The following is the official wording of the newly-revised rules of the game, according to the International Water Polo Board:

1. Field of Play. The distance between the goals shall not exceed 30 yards or be less than 19 yards; the width shall not be more than 20 yards and shall be of even width throughout the field of play. The *goal*, two-yard and four-yard penalty lines and the half-distance shall be clearly marked on both sides of the field of play.

2. Depth. The water shall not be shallower than 3 feet.

3. Goals. Goal-posts shall be fixed at each end of the field of play. These must be at least one foot from the end of the bath or from any obstruction. The width

between the posts to be 10 feet, and the crossbar to be 3 feet above the surface when the water is 5 feet or over in depth; when the water is less than 5 feet in depth, the crossbar to be 8 feet from the bottom. Nets must be attached to the goal-posts in such a way as to enclose the whole goal area, and hang below the surface of the water. The back of the net must be at least one foot behind the goal-line and hung from the height of the crossbar. Goal-posts and nets must be provided by the home team.

4. THE BALL. The ball shall be leather-covered and must be round and fully inflated, and shall measure not less than 27 inches and not more than 28 inches in circumference. It shall be waterproof, with no strapped seams outside and no grease or other objectionable substances on the surface. The ball must be furnished by the home team.

5. CAPS AND FLAGS. One team shall wear white caps and the other team dark-blue caps. Both goalkeepers shall wear red caps with quarterings of his own side's colours. A red flag and a white flag shall be provided for each goal-scorer, and a dark-blue and white flag for the referee. The whole of the above to be provided by the home team.

6. OFFICIALS. The officials shall consist of a referee, a timekeeper, and two goal-scorers.

7. REFEREE. The duties of the referee shall be:

(*a*) To start the game.
(*b*) To stop all unfair play.
(*c*) To decide all cases of dipute.
(*d*) To declare fouls and generally see that these rules are carried out.
(*e*) To decide upon all goals, corner-throws and goal-throws, whether signified by the goal-scorer or not.
(*f*) Goals, fouls, and other stoppages of the game shall be signified by whistle.

The referee's decision on questions of fact is final, and in all cases must be carried out during the game.

(*Note.*) A referee may alter his decision providing such alteration be notified before the ball is again in play. A referee has power to stop play at any period of the game, if in his opinion the behaviour of the players or spectators or other exceptional circumstances prevent the match from coming to a proper conclusion.

8. GOAL-SCORERS. The goal-scorers, having tossed for choice of ends, shall stand at the side and in a line with the front of each goal, and when they consider that the entire ball has passed through the goal-posts, or over the goal-line, at their respective ends only, they shall signify the same to the referee, a red flag denoting a corner ; a white flag denoting a goal-throw ; and both flags to denote a goal. The goal-scorers shall not change ends, and shall keep the score of goals of each team at their respective ends.

9. TIMEKEEPER. The timekeeper must be provided with an ordinary stop watch and a whistle, which must be provided by the home team. He shall notify half-time and time by whistle, and the signal shall take immediate effect.

10. TIME. The duration of a match shall be 14 minutes *actual play*, seven minutes each way. Three minutes shall be allowed at half-time for change of ends. When the ball crosses the goal-line, whether it be a goal, corner-throw, or goal-throw, it shall be dead until the restart of the game, or until it leaves the hand of the player taking the throw, and all such time shall be deducted. Time occupied by dispute or fouls, or when the ball is thrown from the field of play, or lodges on an obstruction, as per Rule 21, shall not be reckoned as in the time of play.

11. TEAMS. Each side shall consist of seven players, who shall wear drawers, or costumes, with drawers underneath the costumes. In baths, no oil or grease or other objectionable substance shall be rubbed on the body.

12. Captains. The captains shall be playing members of the teams they represent; they shall agree upon all preliminaries, and shall toss for choice of ends; the loser of the toss shall have choice of colours. If they are unable to agree upon any point, the referee shall decide it for them.

13. Starting. The players shall enter the water and place themselves in a line with their respective goals. The referee shall stand in a line with the centre of the course, and having ascertained that the captains are ready, shall *blow his whistle,* and immediately throw or release the ball into the water at the centre of the field of play. From the start or restart a goal cannot be scored until the ball has been handled, viz., played with the hand below the wrist, either by two members of one team, in which case the scorer shall be within half-distance of the goal attacked, or by a player of each team. An attempt on the part of the goalkeeper to stop the ball when it has been handled by the players of one team only, and shot over half-distance, shall not constitute handling, and should the ball cross the goal-line, *hit the post or the goalkeeper*, a goal-throw shall be awarded.

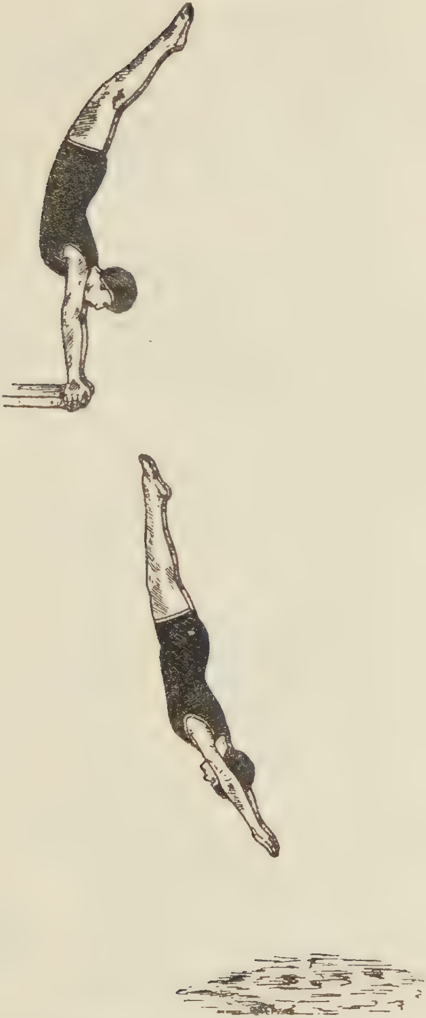
14. Scoring. A goal shall be scored by the entire ball passing beyond the goal-posts, and under the cross-bar. If, on the notification of half-time or time, the ball be not fully through the goal-posts, no goal shall be allowed.

A goal may be scored by the head or feet, providing the ball has been previously handled by two players, as provided for in Rules 13 and 17.

15. Ordinary Fouls. It shall be a foul:

(*a*) To touch the ball with both hands at the same time.

(*b*) To hold the goal-posts, *nets*, rail, side, *or any other fixtures*, during any part of the game.



Handspring Dive. (*See page* 143)

(*On Rule* 15, *clause b.*) When a goalkeeper is penalized for holding the bar or rail at the end of the bath, the free-throw shall be taken from where such foul occurred.

(*c*) To walk about the bath.

(*d*) To stand on or touch the bottom during any part of the game, unless for the purpose of resting.

(*e*) To interfere with an opponent or impede him in any way, unless he is holding the ball.

(*f*) To hold the ball under water when tackled.

(*g*) To jump from the bottom or push from the side—except at starting or restarting—in order to play the ball or *tackle* an opponent.

(*h*) To hold, pull back, or push off from the opponent.

(*i*) To kick at an opponent.

(*j*) To assist a player at the start or restart of the game, or for any player to push off from any part of the goal-post *or its supports*.

(*k*) For the goalkeeper to go more than 4 yards from his own goal-line, or to take a goal-throw improperly. (Rule 20.)

(*l*) *From a free-throw to throw the ball directly* (*or after dribbling*), at the goalkeeper or to an attacking player within two yards of goal. (Rule 20.)

(*m*) To touch the ball before it has reached the water, when thrown in by the referee. (See Rules 17 and 21.)

(*Clause e.*) Dribbling or striking the ball is not "holding", but lifting, carrying, pressing under water, or placing the hand under or over the ball when actually touching, is holding. Dribbling the ball up and through the posts is permissible.

16. Wilful Fouls. If, in the opinion of the referee, a player commits an ordinary foul—(Rule 15)—wilfully, or one of the following specified offences, the referee shall at once order him out of the water until a goal has been scored.

It shall be considered a wilful foul:

(*a*) *To deliberately* start before *the referee blows his whistle.*

(*b*) To deliberately waste time *by* (1) *failing to take up the necessary position at the restart of a game with reasonable speed;* (2) *failing to assist the normal progress of the game when in possession of the ball.*

(*c*) For a player to take up a position within two yards of his opponents' goal-line.

(*On Rule* 16, *clause c.*) A player, who has entered the two yard area to tackle an opponent, or for any other legitimate purpose, must leave such area with all reasonable speed. If the ball is passed back to such player while in the two yards area, he must, before playing the ball, first leave such area.

(*On Rule* 16, *clause c.*) That it is considered a wilful foul for a player to take up a position, whether stationary or not, within two yards of his opponents' goal-line, except (*a*) when dribbling the ball; (*b*) when going to tackle an opponent who has received, or is about to receive, the ball; and (*c*) when swimming to the ball, when it is within the two yards line.

(*d*) To deliberately change position after the referee has blown the whistle to stop the game and until the ball is again in play.

(*e*) To deliberately splash in the face of an opponent.

(*f*) To strike at the ball with the clenched fist.

(*g*) *To refuse to play the ball at the command of the referee.*

Any player ordered out of the water for misconduct or for a wilful foul shall not re-enter until a goal has been scored, notwithstanding that half-time may intervene, or extra time be played, and then only with the consent of the referee.

(*Note* 1.) In the event of a referee ordering a player out of the water and such player refusing, the game shall be stopped, the match awarded to the other side, and the offending player reported to the body governing the competition.

(*Note* 2.) *A referee may use his discretion in not declaring a foul, if, in his opinion, such action would be an advantage to the offending side.*

17. FREE-THROWS. The penalty for each foul shall be a free-throw to the opposing side from the place where the foul occurred. The referee shall declare a foul by blowing a whistle and exhibiting the colour of the side to which the free-throw is awarded. The player nearest to where the foul occurred shall take the throw. The other players shall remain in their respective positions from the blowing of the whistle until the ball has left the hand of the player taking the throw. A free-throw shall be such as, in the opinion of the referee, allows all players to see when the ball leaves the hand of the thrower. In the event of illness or accident or of one or more players from each team committing a foul so nearly at the same moment as to make it impossible for the referee to distinguish who offended first, he shall have the ball out of the water and throw it as nearly as possible at the place where the foul occurred, in such a

manner that one member of each team may have equal chance of playing the ball. In such cases the ball must be allowed to touch the water before it is handled. In all cases where a free-throw *or a throw-in by the referee* is allowed under this Rule and Rules 15, 16, 19, 20, and 21, the ball must be handled, i.e., played with the hand below the wrist, by more than one player before a goal can be scored.

> (*On Rule* 17.) If a player is ordered out for moving after a free-throw has been awarded, the ball shall be thrown from the position of the original free-throw, and *not* from the place where the foul for moving occurred.

18. PENALTY-THROW. A player wilfully fouled when within four yards of his opponents' goal-line, shall be awarded a penalty-throw, and the player who commits the offence must be ordered out of the water until a goal has been scored. The player to whom a penalty-throw is awarded shall proceed to any point on the four-yard line and await the signal of the referee by whistle.

In the case of a penalty-throw, it shall not be necessary for the ball to be handled by any other player before a goal can be scored, but any player within the four-yard line may intercept a penalty-throw.

19. GOALKEEPER. The goalkeeper may stand to defend his goal, but he must not throw the ball beyond half-distance: the penalty for so doing shall be a free-throw to the opposing side from half-distance at either side of the field of play. The goalkeeper must keep within four yards of his own goal-line or concede a free-throw from the four-yard line to his nearest opponent. The goalkeeper is exempt from clauses *a*, *c*, *d*, and *g* in Rule 15 and clause *f* in Rule 16, but he may be treated as any other player when in possession of the ball. Except when injury or illness compels him to leave the water—when Rule 22 shall apply—the goalkeeper can only be changed at half-time. In the event of a goalkeeper being ordered

out of the water, his side cannot appoint another goalkeeper except at half-time, as defined above, and any player defending the goal in his place shall not come under the special limitations and exceptions attached to a goalkeeper. *In the event of a goalkeeper being awarded a free-throw, other than a goal-throw, the nearest member of his team may take the throw from the place where the foul occurred.*

20. GOAL- AND CORNER-THROWS. A player throwing the ball over his own goal-line shall concede a free corner-throw to his opponents, and such free corner-throw shall be taken from the two-yard line at the side of the bath by the player on the opposing side nearest the point where the ball leaves the field of play. If the attacking side throw the ball over, it shall be a free goal-throw to their opponents' goalkeeper, who, *from between the goal-posts*, must pass the ball to another player or beyond the two-yard line. The whistle must be blown immediately the ball crosses the goal-line, and from that time until the ball leaves the hand of the player taking the free-throw, all players must remain in their respective positions.

> (*Note.*) If a goalkeeper puts the ball in play by a free-throw, and, before any other player has handled, regains possession, and allows it to pass fully through his goal, a corner-throw shall be awarded to the opposing side.

21. OUT OF PLAY. Should a player send the ball out of the field of play at either side, it shall be thrown in any direction from where it went out by one of the opposing side, and shall be considered a free-throw. The player nearest the point where the ball leaves the field of play must take the throw. Should the ball strike or lodge in an overhead obstruction it shall be considered out of play, and the referee shall then stop the game and throw the ball into the water under the said obstruction. The ball must be allowed to touch the water before it is handled,

and must be handled by more than one player before a goal can be scored.

(*Note.*) *The ball is in play if it rebounds from the goal-post or crossbar into the field of play.*

(*On Rule* 21.) In the event of the ball striking the rail, coping, or side of the bath above the water:

(*a*) The ball is out of play if it rebounds into another part of the field of play.

(*b*) The ball is not necessarily out of play if it drops into the water immediately under the place of contact; in such case it is a matter entirely within the discretion of the referee, who would be guided, in making a decision, by whether an unfair advantage had been gained thereby.

22. LEAVING THE WATER. A player leaving the water or sitting or standing on the steps or sitting on the side of the bath in which the match is being played, during the progress of the game, except in cases of illness or accident or by permission of the referee, shall not re-enter the water until a goal has been scored or until half-time. Any player having left the water must have the permission of the referee before re-entering and he may only re-enter at his own goal-line. A player leaving the water during the progress of the game, without the permission of the referee, or refusing to re-enter the water at the request of the referee, shall be deemed guilty of misconduct, and be liable to suspension by the body governing the particular match in which he is competing.

HINTS FOR THE POLO PLAYER

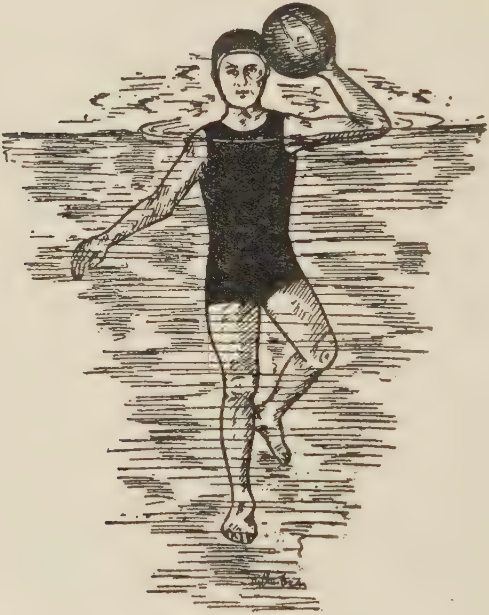
The efficient polo-player is a good all-round swimmer; particularly he has developed trudgen, treading water, and back-stroke.

But besides these general requirements you must, if you would become an expert player, have much practise in catching and throwing a polo ball—a football will do very well as a makeshift, for it is precisely the same size.

There are a number of common throws to be learnt.

SHOULDER THROW

For this you must tread water, one hand paddling beneath the surface. With the other hand the ball is lifted from the water, and held against the side of the head to ensure steadiness. From this steady, easy position the ball can be hurled forward with great force and accuracy.

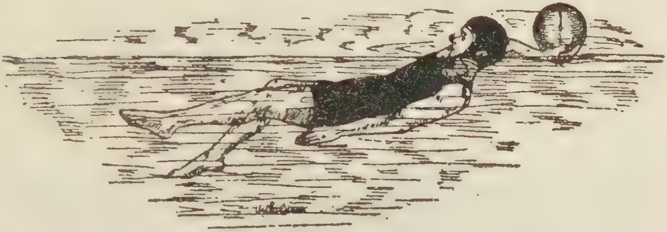


Shoulder Throw

This is an ideal throw for such occasions as give opportunity for a calm, unhurried shot at goal.

BACK THROW

This is very similar to the shoulder throw. It is taken from an ordinary back-stroke position. To make this throw you will usually swim up to the ball on your breast, then twist over on to your back. The hand, behind the head, dips beneath the ball—in a manner resembling the shoulder throw method—then hurls it forward. By this method the ball can be thrown a long distance, with good aim.



Back Throw

OVERARM PASS

If you are swimming trudgen or overarm, you are best able to throw the ball sideways, as, for instance, in passing to another player swimming up the other side of the bath.

The hand, having circled round above the surface and reached the front, pauses for an instant, palm outwards, to gain steadiness for the dip. This is the moment when the ball is seized and thrown outwards, at right-angles to the body.

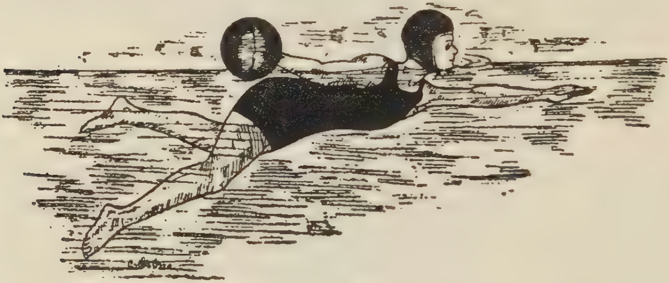
BACK PASS

A useful but difficult throw is that taken from the same position as described for the overarm pass, but in which the ball is thrown back over the shoulder. The hand, instead of catching the side of the ball as in the last method, hooks right round in front, so that the ball can be drawn back.

This throw often catches a goalkeeper by surprise, for the player, of course, would be facing away from goal as he or she made such a shot. But, naturally, it is more difficult to get good aim than in a forward throw.

ROUND-ARM THROW

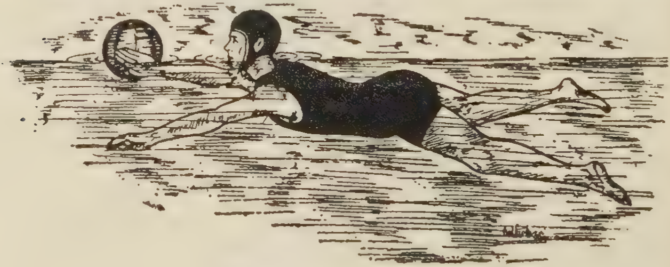
In this throw the ball is caught just as the hand is emerging from the water down by the side, in trudgen- or over-arm stroke. From this position a big, forward arm-swing can then be made, the arm being fairly straight.



Round-Arm Throw

BREAST-STROKE THROWS

These resemble those of the trudgen swimmer. There is the outward pass ; the backward shot ; and the backward,



Breast-Stroke Throw

over-the-head pass. In this latter, while the one arm is tossing the ball back, the other will make a strong downward stroke to hold the body steady.

OTHER POINTS

In order to lift a polo ball from the water for a throw it is necessary, you will discover, to make a quick twist of the hand beneath it, and immediately to lift.

At the instant when any throw is made the disengaged hand should always make a downward stroke, and the legs a kick, so as to resist the *slip* back resulting from the throw.

For punting or dribbling the ball, the ideal stroke is the trudgen. The ball is allowed to float in front of the face, and then, as you swim forward, it is driven along by each of the arms as they swing round, or by the chin. The arms form a sort of pen from which the ball cannot escape. The polo player must be able to punt the ball in this fashion at a good speed.

After you have gained some facility with simple throws, with both arms, you should begin to practise passing with a friend. You and he will swim along the bath, one keeping on either side. You will pass the ball regularly and swiftly, aiming always, as you throw, to make the ball drop just in front of your companion. Unless you allow thus for his forward movement while the ball is in the air he will always have to pause to make the catch.

The seven players in a polo team are arranged thus: goal, two backs, one half-back, one centre-forward, two forwards.

Generally, the same sort of qualities that are required by each player in a football match are about equivalent to those needed by the polo player. The forwards should keep well up towards the goal; they should be alert, ready at passing, quick and strong at shooting. The half-back is primarily a combination player; he must be unselfish, wasting no time in shooting himself but passing constantly to his forwards ; he must be ready to receive passes from any other member of his team, and be expert at dribbling the ball clear of his opponents. The backs should keep close guard over the opposing forwards and be quick to pass to each other and to the half-back. They will rarely make long passes to the forwards. The goalkeeper should be specially skilful at catching and punching the ball. He need not necessarily be a fast swimmer, but he must be able to keep afloat easily and to pass readily to the backs.

Diving

To fall with steep header, like arrow from bow;
To swoop like an eagle descending on foe,
And flash towards the water that shimmers below—
'Tis glorious to be a swimmer!

MOST swimmers have sometimes the unhappy experience of wading out into chilly water, on a cloudy day when a keen wind is blowing—of wading out through such long shallows that an interminable horror is endured before the body can be completely immersed and the agony brought to an end. And the bather at such a time wishes desperately that he could plunge at once into deep water. Ordinarily, all this need not happen.

Yet many bathers drag out that long torment every time they enter the water, when they might put an end to it for good by learning to take simple dives.

Good diving is not nearly so common as one would expect. So many people seem to become satisfied when they are able to make a plain header from a height of a few feet. They are, it would seem, quite unaware of the vast realm of diving, and of the multitudinous beautiful and useful feats which it comprises.

There is probably no exercise which will serve to develop nervous and muscular control as much as diving. Though some of its higher branches are connected closely with the work of a gymnasium, yet none but swimmers, of course, ever become great divers. Diving should be learned simultaneously with swimming. In another part of this book, my "Swimming Course", I recommend that both arts be studied from the very first day.

The greatest difficulty about diving is always the start. Many beginners abandon their efforts after a few attempts, having found them rather painful. This is customarily because they do not start at the real beginning. To stand on a bank above the water and then pitch forwards head-first is not the beginning of diving—it is a stage that should be reached after considerable preliminary work.

You are not accustomed to fall in head-first, anywhere ; the idea of doing so rather appals you. Particularly unnerving is the idea of falling head-first into the water where, as a beginner at swimming, you do not feel very much at home.

Very well then—don't begin by going head-first at all !

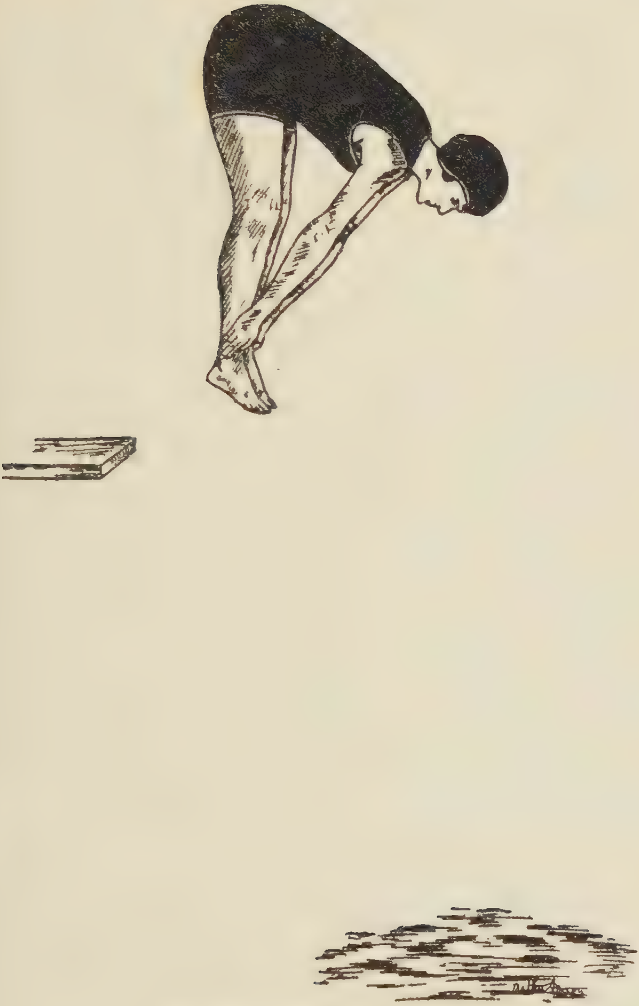
Your earliest exercises should consist of merely jumping into the water—shallow water if you prefer it. The first jumps may even be made with your feet already in the water, but as confidence is gained you should jump from higher points until you have climbed one or two feet above the surface. Similarly, you should try to progress from shallow to deep water—though that is not an immediate necessity.

Always allow your head to go right beneath the water —for first attempts you may pinch your nose. The eyes, too, should be opened immediately they are beneath the surface.

These jumps can soon be greatly improved by considering the position of the body.

A good feet-first jump looks almost as well as a header.

You should jump from the board or bank with both feet together and with the body quite straight and vertical. The arms may be folded, clasped behind the back, held at the sides, or extended above the head. The feet, having left the take-off—as the point from which the dive is made is called—should be pressed down so that



Jack-Knife Dive. (*See page* 144)

the insteps are in line with the fronts of the legs. In this vertical position you will enter the water. Should you desire not to go very deep your legs may be spread as you descend, though not until they are buried beneath the water. If you do go deeply you may hasten your return to the surface by a couple of breast-stroke kicks.

The next stage of your progress will be the accomplishment of head-first tumbles.

Sit on the steps or bank, with your feet on a ledge beneath the water. Spread your knees widely apart and lean your body forward between them. Your arms must be stretched beyond your head, with biceps pressing against your ears, palms flat and facing downwards, and thumbs hooked together. The arms and trunk will thus be pointing down towards the water. Now, having taken a good breath, lean still farther forward until you overbalance and topple into the water.

That is your first big difficulty accomplished, and you are now well on the road towards becoming a diver. This sort of tumble should be practised many times. But gradually you may improve it by straightening your body as you enter the water, so that the hands immerse a foot or two farther from the bank than at first.

You may also sit on a higher step until at last your feet, too, are just above the water. All this while you must be striving to get your body more and more straight, and to enter the water still farther out by giving a little push from the feet just as they leave the step.

The next stage must now come—that of real dives.

The take-off should be one to two feet above the water ; if its edge be smooth you may cover it with a towel or bathing costume so that your feet may not slip.

Stand on the take-off, your toes just lapping over the front edge. Bend your body forward, exactly as in the previous tumbles and, similarly, topple into the water.

Two or three trials of this sort may be made, and then the final, correct-style dive.

Stand as before. Hold your head upright and take several slow, deep breaths, to prepare your lungs for the breath that is to be held. Slowly swing your arms backwards and forwards by your sides until, at the moment when your body goes forward, the arms, too, are carried forward and upward. Thumbs should meet and hook when the arms are fully extended beyond the head. At the same moment a spring should be made from the balls of the feet, in a slightly upward direction, and your body will then tilt over into the desired angle for entering the water. (*See illustration, page* 61.)

It may be that you will crash flatly on to the water, a trifle painfully, but such an accident need not happen again—in fact, it need not happen at all if you are sufficiently careful. If you do go flat it will because your legs were not thrown up enough as you sprang. There are several ways of ensuring that they do rise.

The easiest is to imagine, before you dive, that a rail is fixed about two feet in front of you at the height of your knees. Your attention must, therefore, be concentrated on getting your feet safely over that rail—and this will result in them being thrown to a sufficient height.

Another plan is to have two friends, experienced divers, to hold a towel before your legs. As you dive your companions will see to it that your legs become properly adjusted by raising them, if necessary, with the towel.

A single friend may help you in the same fashion by holding a light, stiff cane with which to elevate your feet.

As you enter the water the hands must be sloped upwards so as to bring you gliding to the surface.

In all headers of this nature your body will be straight, with legs and arms in line, and the back hollowed. The commonest fault is that of permitting the legs to drop apart ; some novices even let their feet sag back until the heels nearly touch the thighs. In the perfect header, knees are together, ankles touching, and the feet pressed in line with the shins.

The plain header should now be practised at all heights up to six or eight feet. The angle of the body as it enters the water will naturally vary with the height of the take-off, but all headers will be performed in the manner described.

RUNNING HEADERS

The running header should next be learned. It can be made either from a firm take-off, like the bank of a river, or from a spring-board.

A run of twenty or thirty feet is made and the body is launched into the air. The leap should be made in an upward direction. When the body is at its highest point the head and arms will be dropped, and the effect will be that the body will decline towards the water at the proper angle, as for an ordinary header.

The spring from the take-off may be made either from one or both feet. If the take-off is firm you will leap from a single foot. But if the dive is being made from a spring-board, it is usual to give a jump on the end of the board with both feet together so that the limbs are properly adjusted before the leap is made ; in the former style they must be brought together and straightened while in the air. (*See illustration, page* 71.)

Some practise is required before one's steps can be evenly fitted in at the end of a run.

The arms are most often swung into their normal header-position as soon as a leap is made, but, providing that the dive is being made from a sufficient height, they may, for the first part of the glide through the air, be stretched at right-angles to the shoulder in the manner of the "Swallow Dive".

PLUNGING

A plunge is a plain header made from a firm take-off at a height of not more than two feet above the water. The aim of the plunger is to travel the greatest possible distance through the water from the impetus of the plunge. A good plunger can cover from forty to seventy feet.

Stand on the take-off, swinging your arms to and fro and preparing your lungs by deep breaths. Then, as your body, leaning forward, passes the balancing point, swing your arms forward very vigorously and thrust from your toes with every ounce of your strength. Your hands should enter the water about ten feet in front of the diving-base. (*See illustration, page* 81.)

The angle of the plunge should be very flat, though not so much as to prevent you entering cleanly.

See that you do not go more than two feet below the surface, and do not rise sharply—if you do you will lose a good deal of your impetus.

The success of the glide that now follows depends principally on the correct position of the body. You will obviously glide farthest if you are flat and straight so as to offer the least resistance to the water. Do not raise your head above the surface ; your entire body should be about an inch or so below the water. If your legs begin to sink you may check them by slightly bending the knees and by dropping the head still lower between the arms. Take care that no limbs sink out of line with the rest. This will cause you to swerve and so shorten your plunge. A winding trail may actually cover forty feet, but if the final point is only thirty feet from the take-off, then the length of the plunge will be measured as thirty.

Should you be in a swimming-bath you may be assisted in steering a straight line by watching the tiles beneath you.

A useful method of practise is to plunge backwards and forwards across a swimming-bath.

FEET-FIRST DIVE

This follows naturally from the plain jumps already described.

Keeping the body upright you must leap well out from the diving-place. At the same time fling your arms forwards and upwards, until the thumbs be hooked. This will cause the body to tilt back into the angle usually reached with a header, and in this fashion you will enter the water.

As soon as you are beneath the surface you may spread your legs and rise by a kick ; or you may twist over so that you are face downwards and so rise in a normal breast-stroke or trudgen attitude, facing the take-off ; or you may keep your body rigid and continue the dive so that the feet emerge just as do the hands from an ordinary header.

You must be careful at the beginning to leap far enough from the bank, otherwise your head or arms may strike the take-off as you fall. One precaution against this is to have a friend waiting there with a cushion to fend you off from any such disaster. The best safeguard is to be sure that you do not fling your arms back too vigorously at first. As you become more skilled you may more and more flatten the angle of the dive and at last you will be able to make a "feet-first plunge".

This plunge is seldom executed except by swimmers who are about to perform the "Submarine", or "Torpedo".

HIGH DIVING

Experts are able to dive from heights of round about eighty feet ; but for any amateur to attempt that sort of thing would be extremely dangerous. The average diver, when speaking of high diving, refers to heights of eight to twenty feet above the water.

High diving should not be attempted until you have become thoroughly skilled with all that has so far been described in this section.

You should wear a thick costume and rubber cap covering the ears ; a woollen jersey over the costume will give additional protection.

If by any chance you perform a ten-foot dive in the same fashion as you would a two-foot header you will discover that you have made a mistake, for most probably you will fall right backwards and reach the water flat on your back in very painful and confusing fashion.

You must not throw up your legs in high diving !

Instead, after the preliminary swing with your arms, and the deep breath, you will spring outwards and upwards from the take-off. Your arms will have reached their normal diving position, but your head will be held high. When you are in the air at the highest point, your head will be sharply depressed, until your chin reaches your chest, and at the same time the entire body will be straightened. The result of this will be that you will come to the requisite angle, of something like 45 degrees, and thus will drop towards the water, which you will enter as in any other header—though rather more steeply.

Probably you will go deep—the water, of course, should be not less than eight feet. If you go a long way down you may hasten your return to the surface by a few kicks. But be quite sure that you kick in the right direction. Flurried divers, deep down in dark water, have sometimes swum downwards instead of towards the top. You may be quite sure of the right direction if you wait a few seconds and discover which way your body naturally rises.

Never, after a deep dive, tilt up your hands quickly as in a shallow header, or you may injure yourself.

As soon as possible become expert from all heights up to twenty feet. The fancy dives described in the next few pages can most effectively be made from twelve to fifteen feet.

THE SWALLOW DIVE

The most popular of all fancy dives is the swallow or swan dive. It is not difficult, and yet it is extremely graceful. It is a high dive, with body kept almost horizontal, and with the arms held out at right-angles to the body.

The leap from the take-off is made in the ordinary fashion, but the arms are not swung right forward as for a header. Instead, they reach the point at right-angles to the sides of the body, where they are in line with each other, and remain thus. It is not quite true to speak of them being "in line", because they are slightly thrown back so as to fully expand the chest.

In a plain header the head, when the body is at the highest point, is dropped forward. But in the swallow dive the head is kept vertical ; this results in the body falling through the air flatly instead of at a steep angle.

The back must be hollowed and the lower line of the body, from forehead, round by chin, chest, thighs, insteps, to toes, should form one regular, graceful curve.

The fall through the air, in this position, has a fair resemblance to the swoop of a swallow.

The fingers may be slightly spread, to resemble the feathers at the tips of a bird's wings. Some divers find it easier to preserve the rigidity of their bodies and limbs if they hold their fists clenched.

An alternative style of swallow dive has the hands placed on the hips. (*See illustration*, *page* 89.)

But all such dives finish in the same fashion. When the body is near to the water the arms are flung round until they are stretched beyond the head, with thumbs hooked ; the head is dropped forward until the ears are between the arms, and the chin almost touching the chest, and the body thus enters the water in the normal header method.

It is the dropping forward of the head which brings about the change in position of the body to the necessary steep angle required for the water-entry.

Almost every fancy dive finishes similarly—that is, the position held during the fall through the air is abandoned at the last moment.

BACKWARDS HEADER

This may look both difficult and dangerous, though in reality it is neither. Naturally some little hesitation will precede first attempts, but when once a start has been made you will have little trouble.

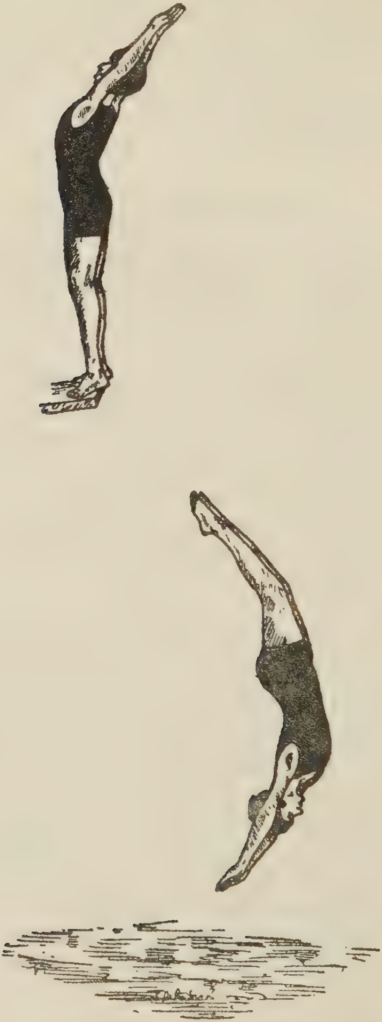
A backwards header is simply an ordinary dive made with the body facing the reverse direction.

Stand on the take-off facing towards the bank, and with your heels just over the edge of the board. Perform the preliminary breathing exercises, but do not swing the arms, for you will not need their impetus. Extend the arms above the head, with hooked thumbs—the palms thus facing shorewards.

Now slowly lean back, bending your body from the hips, until you pass the balancing point. At this instant spring upwards from the feet, not too violently. You will then turn over and descend towards the water perpendicularly, your back towards the diving-base.

You will go rather deeply in the water. When you are submerged, the easiest way to come to the surface will be to press your chin on your chest ; bend your body and your arms upwards, away from the bank, and so glide to the surface with your body facing upwards—exactly the reverse position of an ordinary dive. To attempt to slope your hands and come up in the normal fashion means, probably, the difficulty and confusion of collision with the bank.

If, however, you have succeeded in flinging your legs far enough over during the fall you may have attained



Backwards Header

to an angle of a plain header instead of the perpendicular position. If you should enter the water at such an angle you will, of course, treat the dive exactly as an ordinary header, though you must rise quickly to avoid hitting the bank.

BUTTERFLY DIVE

Stand as for an ordinary high dive, but with the hands spread apart.

Retaining this position make your spring, by the usual method. Having left the board the legs, too, will be spread from each other until the four limbs have taken the form of a giant letter X. This position is held until the water is almost reached, when the limbs are once more brought into line. (*See illustration, page* 105.)

This butterfly dive may also be made from the position described for the "Handspring Header". In this style the legs will be separated before the actual dive, and the arms after the take-off has been left.

HANDSPRING HEADER

This is an easy dive, but one that is extremely pleasing to the onlooker, if perfectly performed.

Kneel on the end of the take-off, gripping the edge firmly with your hands. Then lean forward slowly and elevate the legs until you are balancing on your hands, with the body vertical in the air. The head should be kept up—your face parallel with the surface of the water. The feet should be pointed so that the front line of the body makes one continuous curve. Legs will be together.

When perfect balance is achieved—not before—you will launch yourself into the air by thrusting forward with the hands. Your hands will loose their hold and readjust themselves, straight and with locked thumbs, so that you fall towards the water just as from an ordinary dive. (*See illustration, page* 119.)

You must be extremely careful that you push yourself far enough from the diving-board, otherwise your knee or foot may be grazed as they descend.

During the dive the head will drop naturally between the arms.

SITTING-JUMP

This is more amusing than useful.

Leap into the air, as for a feet-first jump, but immediately that you are clear from the take-off draw your legs up into the position you assume when sitting cross-legged on the floor. Your right hand will clutch your left foot and vice versa. Thus you descend and enter the water with a most tremendous splash.

JACK-KNIFE DIVE

This is an excellent thing for limb control. You may make preliminary test of the position required for this dive by standing on the bank and, keeping the legs straight, bending forward until the hands touch the ankles. (*See illustration, page* 133.)

The customary leap into the air—in an outward and upward direction—is made from the take-off; and the position described is then assumed and retained during the fall towards the water.

Then, at the last moment, the body is straightened as usual.

CANNON-BALL DIVE

This dive is begun and ended just as the jack-knife or swallow. The "cannon-ball" position is reached by drawing the knees up under the chin and clasping the hands round the fronts of the legs.

PLANK DIVE

The body is elevated into the position described for the hand-spring dive, though kept rather more straight.

Then, without loosing the hands, and with the body remaining quite rigid, you fall backwards. The body thus swings through the air until it drops below the diving-board. At this instant the hands release their hold, giving a slight push as they do so, and the body thus enters the water as in a feet-first dive, with arms above the head.

OTHER SOLO DIVES

It is not necessary to describe in detail any other dives. A very great number of variations can be made by all sorts of adjustments of the limbs, body twists, and somersaults. Here are just a few more :

(*a*) Header with single forward somersault. This somersault is, of course, made in the air, the body being doubled up in cannon-ball fashion, and the water is thus entered head-first, in a plain dive.

(*b*) Header with one and a half forward somersaults —the water being entered feet-first.

(*c*) Header with feet-forward somersaults, the water being entered head-first.

(*d*) Backward headers, with the various somersaults.

(*e*) Somersaults taken from kneeling or sitting positions on the diving-board. These may be made as either plain or cannon-ball dives.

(*f*) Front-header– the body being twisted during the fall so that the water is entered with back to the diving-base.

(*g*) Backwards header, with body twist, finishing as forwards header.

(*h*) Header beginning with arms folded.

(*i*) Header beginning with arms at sides.

(*j*) Sideways header.

(*k*) Sideways header, with one arm outstretched and the other on the hip or by the thigh.

(*l*) Header, with feet dropping during the fall, so that the water is entered feet-first.

A variation, interesting to the onlooker, may be made at the conclusion of any dive by causing the feet to reappear above the surface instead of the head ; or a quick swim may be made beneath the water so that the diver reappears at an unexpectedly long distance from the point where he submerges.

Normally, the hands should first come out of the water, flat, and with locked thumbs.

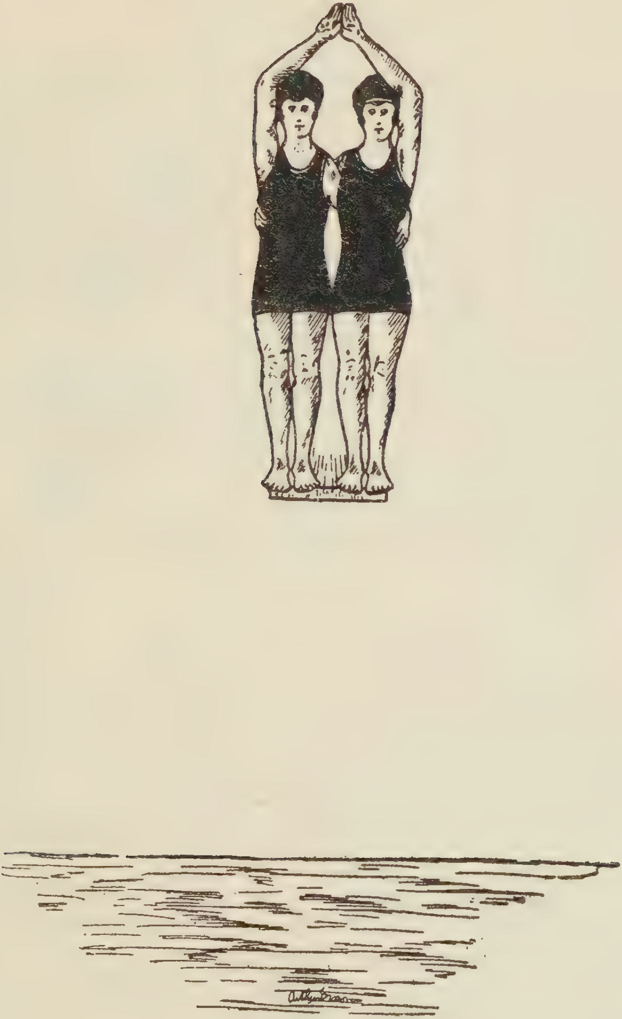
COMBINATION DIVES

There are two types of combination dives—those in which two divers clasp each other in some way and enter the water simultaneously ; and those in which one diver remains on the take-off while his companion dives above him, the first entering the water a moment later in some different fashion.

Combination diving requires a fair amount of preliminary ability.

SHOULDER DIVE

One diver stands in ordinary fashion at the end of the board. His companion sits on his shoulders, legs tucked away beneath the first one's armpits, where they are tightly gripped. The top diver then raises his arms into the usual diving position. The two thus aim at forming one diver of more than ordinary height. The header is taken exactly as if only one diver was concerned.



Twin-Header

THE TWIN-HEADER

The twin-header, in which two divers stand side by side, can be arranged in a number of ways.

Each may clasp his inside arm round the waist of his companion. The outer arms then grasp each other above the divers' heads, and an ordinary forward dive is made.

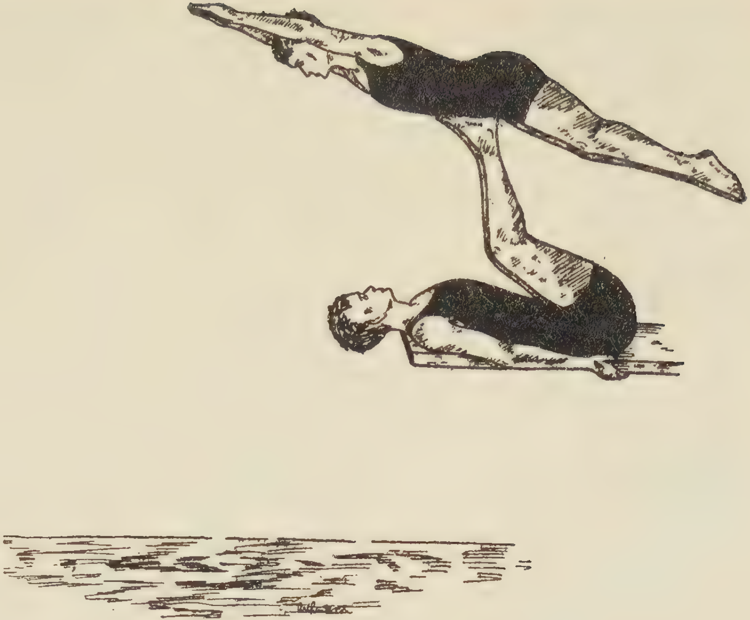
The divers may grip each other's shoulders from behind, with the arms touching each other; and instead of the other arms being stretched above the head they may be held straight out to the front with thumbs only locked and palms facing downwards.

Another method is for the divers to stand almost back to back, though still facing over the end of the board. Their inside, or front arms, are then stretched upwards together, to form the cutwater, while the rear arms remain down behind with hands clasped.

In all such dives it is necessary that both spring at just the same instant and with equal force.

THE JAVELIN PLUNGE

One person lies on his back on the end of the board, head towards the bank, and legs raised into the air. The second diver stands astride his companion's shoulders and bends forward so that his chest rests on the other's feet—his arms must be stretched forward in readiness for the plunge. His ankles are gripped by his companion. The first person draws his legs back supporting his friend, then swings them forward so that the plunger is hurled forward over the water. The second diver then lets his legs swing onward until they come beneath the board, raising his head and causing him to somersault forward into the water. This dive can also be performed as shown in the illustration (*page* 149).



Javelin Plunge. (*See page* 148)

OTHER COMBINATIONS

One diver may kneel, stand, or lie on the end of the board. His companion then leaps, somersaults, or plunges over him.

One of the most popular of this style is for the first diver to lie on his back, head over the end of the board, and legs elevated and apart. His companion then takes a running header between the outspread legs, which have the form of a letter Y. The prostrate one then somersaults backwards into the water, entering feet-first, facing the bank.

Games for Swimmers

THE following games can be practised with two or more swimmers together, and combine fun and interest with most beneficial exercises. A fair all-round ability is required for most of them, and many might be properly described as feats of fancy swimming. Deep water is always preferable.

LEAP-FROG

One swimmer treads water, his arms folded and his head bent forward. He must carefully regulate his breathing so as not to be caught unawares by his companion. This second person swims up from behind, using either breast-stroke or trudgen. As he reaches the first swimmer he puts his hands on his shoulders and thrusts him downwards and backwards, so that he passes right beneath the second one's legs.

Places are thus reversed, the one who has been pushed down rising to the surface in order that he can swim forward and leap over his companion who meanwhile is motionless, treading water.

The one who leaps can make a neat little header as he goes over, depressing his head and straightening his body. The swimmer who is made to sink can save himself from going too deeply by spreading his legs apart and making downward strokes with his limbs.

A whole string of players can take part in this game. The rear one will then leap every one in turn until he reaches the front and so takes his place at the head of the line.

TUG AND LINER

One swimmer acts as the tug, another as the liner. The liner floats on his back, with arms folded or stretched beyond his head, and with legs straightened and together. His feet rest on the shoulders of the tug and, pressing inward, grip the neck of the second swimmer. The tug —the second swimmer—swims an ordinary breast-stroke, his back turned towards the liner, who is drawn along.

It is essential that the liner remains properly on the surface of the water.

Occasionally the tug, instead of towing, may turn round and push the liner before him (*page* 161).

SEAL HUNTING

The seal is allowed to swim any fashion.

He is chased by the hunters. Each hunter must use only one arm either for swimming or for grabbing the seal. The other arm must be kept behind his back.

This is an exciting game, where there is plenty of room. The swimmer who succeeds in catching and holding the seal himself becomes the seal.

CROCODILE RACE

A crocodile consists of four to eight breast-stroke swimmers swimming in a line one behind the other. Each swimmer places his hand on the hips of the one in front. Thus, only the leader is able to use his arms, his followers swimming by legs only. The leader should coach his team by calling orders to them. A good crocodile has all of the kicks timed so that they exactly coincide.

A very amusing race can be had between two crocodiles, particularly if the course be so planned that a number of turns have to be made. (*See illustration*, *page* 171.)

FISHING

The "fisherman" has a rope, either held in his hand or fastened to the end of a pole or rod. The other end of the rope is fastened round the waist or over the shoulder of a swimmer. The fisherman must try to haul in the "fish" as quickly as possible ; while the fish may use any means to keep his liberty. The odds are in favour of the fisher, but a good fish, on a long line, will remain free for perhaps five minutes.

The best plan for a fish is to depend on violent rushes to snatch a foot or two from his opponent's grasp.

TOUCH

This game can be played as well in the water as on land. There is plenty of excitement for the agile swimmer who is a good surface-diver, for he may then often elude a pursuer by swimming beneath him.

Deliberate splashing should not be allowed ; and the game will be more beneficial if it is played in deep water and everyone is forbidden to rest or to hold on to anything.

DOUBLE SOMERSAULTS

Two swimmers, A and B, stand one behind the other in water that is shoulder-deep. A's feet should be spread apart slightly. B, who is behind, looking into A's back, bends his head forward and downward until he can tuck it between his companion's legs just below the knees. B then raises his legs backwards until he can clasp with them A's head—in the same fashion as his own head is being held. At this point the swimmers are back to back, one right up and the other upside down.

When this position is reached both spread their arms out to the sides, at right-angles to their bodies and, leaning backwards, begin to scull themselves over in that direction. They should revolve as on a pivot passing between the middles of their bodies.

Four or five consecutive somersaults should be performed. Breaths can be taken as each head swings over clear of the surface.

DOUBLE GLIDES

Two swimmers, A and B, float horizontally, in line with each other. Their bodies should be quite straight, their arms beyond their shoulders, with hooked thumbs. B's feet should touch A's hands.

A clutches B's ankles, sinking his own head about a foot beneath the surface. At the same time he pulls B along so that he comes gliding over the top of A. B retains his floating position as he glides. A, meanwhile, will have sunk his whole body so that it does not collide with his companion. A's head will be bent forward and his eyes open so that he can watch B's progress.

At the instant when B's arms are over A's feet, A will thrust up his toes so that they catch inside the locked hands of B.

A will now rise to the surface ; B will clutch his ankles, and the whole movement will be repeated from their new positions—that is, B will pull and sink, while A will glide.

This double glide should continue, for perhaps the whole length of the bath. For rapid progress the top swimmer may use a "propeller" thrust.

BOBBING

Two swimmers tread water, facing each other, and about a yard apart. Each places his hands on his companion's shoulders. It is the aim of each to sink his companion.

The surest way to be successful is to sink yourself just beneath the water in order that you can get a downward pull on your opponent—this is much more effective than any pressure you can exert when your arms are nearly at right-angles and when you are at the same level as your companion. You may be equally successful in forcing him down if, by means of a kick, you can spring high into the air so that you achieve a direct downward push on his shoulders.

TWISTING

Two swimmers, gently sculling, float on their backs. They approach until their feet meet and their bodies form one straight line. Each one then grips with his own feet the feet of the other, and endeavours to twist his opponent over by turning over himself. Each must, of course, strain in the opposite direction.

It is important that the bodies remain straight and on the surface.

The swimmer who first succeeds in twisting his opponent wins.

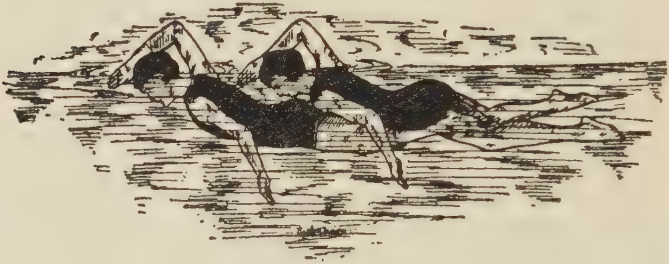
TANDEM SWIMMING

For the back-stroke tandem two swimmers lie flat on the surface, the leading one hooking his feet beneath the armpits of his companion. The second swimmer thus is the only one who can use his legs in a kick. The overarm back-stroke, or better still the back-crawl, should be used. The first swimmer will time his arm movements to coincide with those of his companion.

This looks very charming when neatly performed.

Two crawl-swimmers may perform a tandem crawl. The leader presses his heels beneath the other's armpits. Both swimmers keep their heads above the water as for breast-stroke or trudgen. The second swimmer only can perform a leg movement ; and his arms should be timed in unison with the leader's strokes.

A tandem trudgen can be easily understood. It is performed in the same manner as the tandem crawl—with the essential differences of style.



Tandem Crawl

SCULLING GAMES

Two swimmers, with feet locked together as for "Twisting", endeavour to pull each other along by sculling. About one minute should be allowed for this sculling tussle. If a mark is made on the bank, opposite the feet, at the start, it will be easy to discern who has won.

A rather more difficult form of this game is for the two swimmers, in the same position, to place the soles of their feet together, and for each to endeavour to force his opponent along by sculling feet-first.

SPINNING STAR

The star is formed by four swimmers floating at right-angles to each other with their feet all hooked together at the centre. Then the swimmers scull themselves round, on one direction, each careful to preserve his relative position, until the star is revolving steadily as on a pivot fixed beneath the feet.

THE STRING OF BARGES

Four to six swimmers float on their backs, keeping in one straight line, and each of them gripping the head of the next one with his feet. Then they swim head-foremost, sculling with their hands.

A contest for two teams, swimming in this fashion, can be easily arranged—on the lines of the "Crocodile Race".

DOUBLE FLUTTER

Two swimmers lie side by side in the water and progress by leg-fluttering. They are, of course, on their backs.

Their arms can be arranged in a variety of ways—the simplest is for each to pass his inside arm beneath the waist of his companion, the outside arm can then be held at the side.

In another style they may each fold their arms ordinarily, but having their inside arms linked together. A rather more difficult fashion is for their outside arms to be held at the sides, whilst their inside arms are extended together beyond their heads with hands clasped—or this latter plan may be reversed, the inside arms being kept between the bodies whilst the other arms are stretched past the heads until the hands can clasp.

THE DIVER

Two swimmers, A and B, tread water, facing each other, about a yard apart. A keeps afloat, as described in "Perpendicular Floating", or by making sculling motions with his hands in front of his chest, his legs meanwhile hanging motionless, and together. His head must be leaned back, so that he can keep afloat with less effort. B ceases to kick and raises his arms out of the water until they are above his head, quite straight. His thumbs will now be hooked together and his body will be a straight line. This raising of the arms will cause him to sink, particularly as his feet will be pointing downward. As his head goes beneath the surface B's eyes will be opened, and he will probably glide downward until his head is level with A's thighs. As his eyes are opened he can judge his position by A's body. When B has no more impetus he must continue to descend by making upward sculling thrusts with his hands, until A's legs and feet have slid upwards before his eyes. When B judges that his hands are at a sufficient depth he will slant them forward under A's feet ; and then, with a vigorous kick, he will shoot up to the surface behind A's back—A meanwhile turning round to face him as he reaches the top.

Then A becomes the diver, whilst B remains at the surface.

This is a most useful game for developing calmness and confidence in a swimmer who is under water. The sinking is so deliberate and the diver can so well judge his position by his companion's body that the most nervous swimmer will have no fear in attempting the feat. (*See illustration, page* 181.)

TORPEDOING A SLOOP

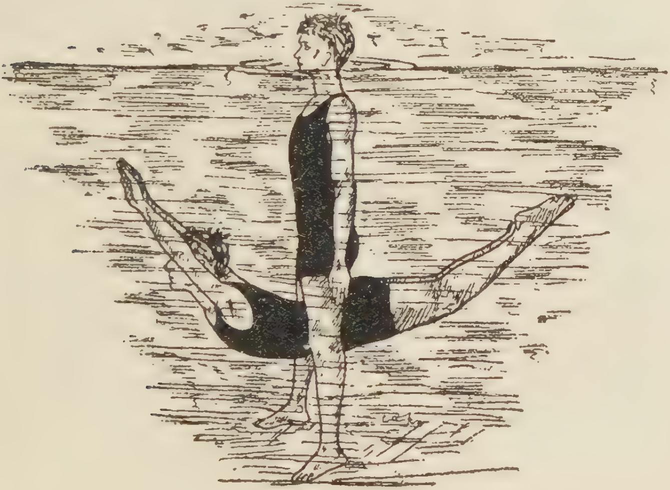
The sloop is a swimmer who sculls on his back with one leg raised—as described in the "Fancy Swimming" pages. The torpedo—also described elsewhere—sculls himself towards the sloop and rams him amidships. The sloop must then sink.

SURFACE PLUNGING

One swimmer remains suspended from the surface, vertically—sculling with his hands if necessary, or standing on the bottom in shallower water—holding his legs widely apart. His companion swims up and makes a clean surface-dive, passing neatly between the opened legs.

This feat is much more stylish if the diver, when he makes his final breast-stroke pull, on dipping his head, carries his arms round right to his sides and allows them to remain there throughout the whole of the dive.

The diver's back should be deeply hollowed, and he will rise to the surface by throwing up his head.



Surface Plunging

TOWING

A pole about six or eight feet long is needed for this game. Two swimmers, using back-stroke, swim side by side, about a yard apart. Each one grips an end of the pole against his chest. The two then tow a third swimmer who holds the middle of the pole. He can grip it with his hands ; lying either face downwards or on his back ; or he may merely hook his heels over it and so be drawn along as in the "Tug and Liner".

TUG-OF-WAR

There are many ways in which this can be arranged.

Two back-swimmers may each hold an end of a rope ten or twelve feet long. They then swim in opposite directions, using their legs only. The successful player in this game is he who remains most flat on the surface so that he is able to get in full and forceful kicks in the proper direction.

If a long rope is used, two teams, with four swimmers a side, may take part in the game.

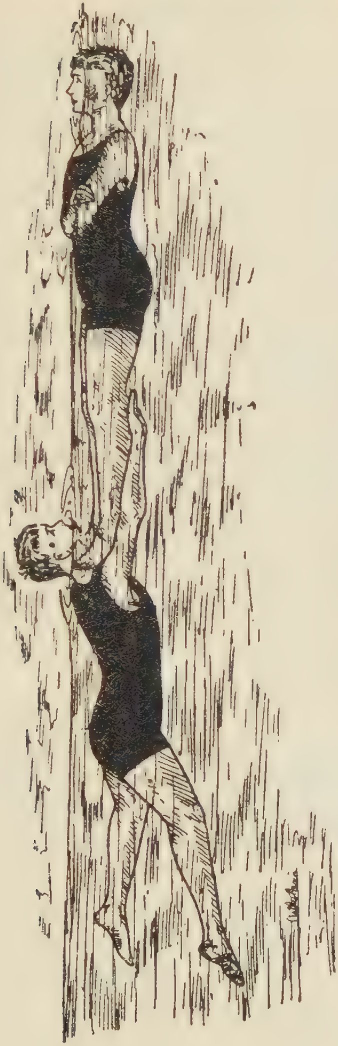
Breast-stroke swimmers require a rather longer rope. Each person has an end looped over his shoulder and beneath the opposite armpit.

A canoeist may compete against a swimmer, a rope being looped round the latter's shoulder and its other end fastened to the stern of the canoe. The contest will be by no means uneven if the person in the canoe is allowed only one paddle. The swimmer may, of course, use any stroke, and he will soon discover in which he is most proficient. Usually, breast-stroke or trudgen serve best.

WRESTLING

Wrestling must be played in water from four to five feet deep. Each wrestler is mounted on the shoulders of a companion whose arms encircle his legs and so hold the combatant firm. The two mounted ones then come to grips and endeavour to hurl each other into the water.

The mount should be one of sturdy build, and particularly with a tough neck, for he will have a rougher time than his wrestler and may easily acquire such aches as will need several days to shake off.



Tug and Liner. (*See page* 152)

READY ALL

This makes an exciting game for four or more swimmers. It can best be played across a bathing-place or bath about twelve yards wide. One person swims to the middle and remains there, treading water. When he calls "Ready All!" everyone must plunge or jump in and try to get to the other side without being caught. If the one in the middle succeeds in catching another, they exchange places, and the captor goes out to take his turn at crossing with the others.

An alternative way is to let all the captured ones remain in the middle until every one has been caught. The last to be taken thus wins the game.

Much skill can be used in this game, for the surest way to get over will be to swim beneath the water. One fairly safe though difficult method of crossing is to dive almost vertically from the bank and then to turn face upwards and to swim across beneath the water. The swimmer will thus be able to watch and avoid his pursuer. An up-side-down breast-stroke should be used for this method.

RELAY RACING

One of the most convenient ways of arranging this is for each team to carry a haversack. Every swimmer should be compelled to sling the haversack over his shoulder before plunging into the water.

Fancy and Scientific Swimming

NO branch of natation gives so much pleasure to the onlooker as fancy swimming. It is here, too, that the swimmer has the best opportunity of proving himself an artist, for the highest art is reached in the practise of the type of feat about to be described.

Before any of this ornamental swimming is attempted one should have reached a high standard of general ability. It is not enough to accomplish a feat of fancy swimming by tremendous effort and obvious labour; it must be performed with such ease and art as makes it seem simple —or not at all.

Repose should be the outstanding characteristic of the fancy swimmer.

MARCHING ON THE WATER

This rather misleading title is customarily used to describe a very popular fancy swimming feat. It is not exactly a floating feat, though floating ability should precede it.

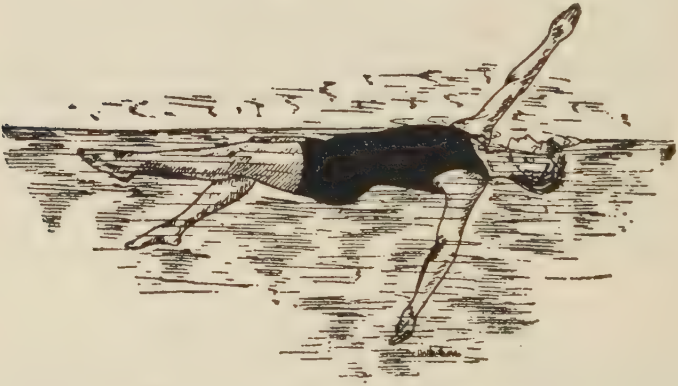
It may be started from an ordinary back-stroke position in which the hands are held straight at the sides. Each leg in turn, from the knee, is pressed downwards to a point almost at right-angles to the surface. The leg is then allowed to drift gently upwards. The downward movement should be vigorous, the upward without vigour.

The body is thus drawn forward through the water by these downward movements, so that the complete action of the body has some resemblance to that of real marching.

To add to the resemblance the arms may move up and down, very slightly, care being taken that they do not impede the progress of the body.

WINDMILL

This is simply an ordinary back-stroke in which the arms are flung over alternately from the sides of the body to behind the head. It can be thought of as an overarm back-stroke with an alternating arm movement.



Windmill

The arms are kept straight whilst in the air, but on entering the water they bend and, with cupped hands, sweep by shortest way to the sides of the body.

The frog-kick may be used for this feat, or a deep leg-flutter. This latter style will make the complete action to somewhat resemble the back-crawl.

MANACLED SWIMMING

Some form of this always makes an effective item in a swimming display. To the efficient, dog-paddling, back-swimmer, and fancy-swimming expert, all the possible variations are fairly simple.

In the commonest style the ankles should be fastened together, and the wrists similarly. In early practise it is not advisable to let these manacles and leg-ties be of too strong a nature, else, if any nervousness should come during the trial, difficulties may easily occur, and perhaps an accident happen. So, for first attempts, a few strands of cotton will be sufficient—how many can be decided by previous trials of the same number of threads on land. If they can be easily broken, then all is well. In an actual swimming display, however, imposing ropes should be used.

To swim, thus secured, you must assume the dog-paddle position or, if you prefer it, you may lie rather more on the side. The legs and arms perform the same movements as in ordinary dog-paddle. An alternative leg action is to draw back the feet until they touch the backs of the thighs, and then to kick them out straight again—thus striking the water with the insteps and fronts of the legs.

An equally impressive feat—to the uninitiated—is for the performer to swim on his back, having his arms bound securely at his sides. This, of course, is extremely simple.

The expert may even keep afloat and make progress—providing that he is in salt water and in a current—even although his legs are bound and his arms fastened to his sides.

ROLLING LOG

To perform this, float horizontally, arms and legs stretched in line with the body.

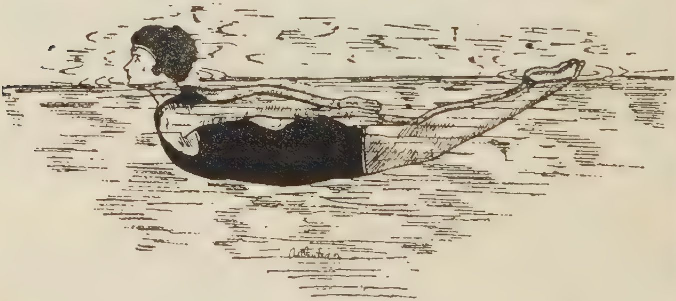
By gradually straining one side of the body upwards you will, after a moment, topple over—without, providing you are careful, sinking from the surface.

When once you have begun moving, and have turned over on to the breast, continue the turning action and you will presently be rolling along the surface like a log.

It is a good plan to have some preliminary practise for this feat by rolling on the bank very slowly, observing exactly how you perform this. You will then be able to repeat each muscular action when you are on the water.

CANOE

This can be started from the breast-stroke position. At that point of breast-stroke when the legs are together you must let them remain so, but your arms must be swept right round until they are straight by the side.



Canoe

The hands now perform a sculling action, thrusting the water towards the feet, but taking care to disturb the arms as little as possible. As a result the body is driven head-foremost.

But it is necessary to keep the soles of the feet above the surface, since they and the head represent the opposite ends of the canoe. This makes the feat rather difficult.

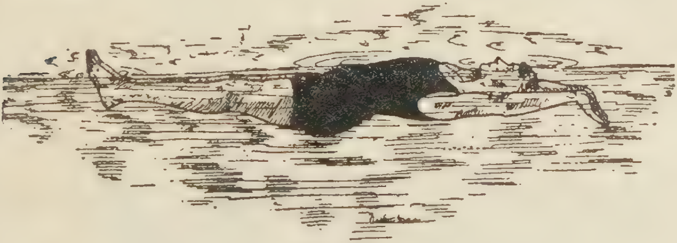
To keep the feet on the surface the hands must make their sculling movement with a slightly downward direction. Each time that you feel your feet have a tendency to sink an extra downwards pressure should be made with the hands.

The lower line of the body, from head round to toes, should form one continuous, graceful curve, as in a swallow dive. The middle of the back, deeply hollowed, will thus be the point of the upper side of the body which is farthest beneath the surface.

Take care that the arms remain close to the sides. Each arm gains a slight sinuous motion when the sculling thrusts are being properly made.

PROPELLER

This is a combination of horizontal floating with sculling. The body must lie along the surface of the water, face upwards, with the hands stretched beyond the head.



Propeller

In this position the sculling motions are made, driving the body feet-first. The arms must be moved as little as possible ; the hands swing very freely on the wrists. The movement can be most easily understood if one thinks of scooping the water backwards from the head. The hands twist outwards and upwards. This upward part of the action must be particularly observed, for it is most necessary, in order that the legs may be kept on the surface.

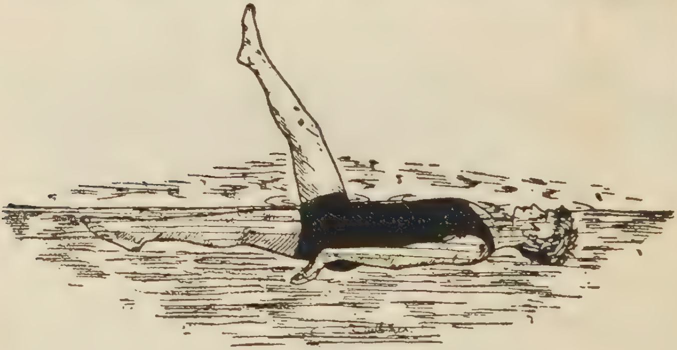
The feet should be constantly held pointed in line with the legs.

The propeller can be varied. For instance, if one hand at a time be used the body will be driven round in a circle—providing that the bathing-place is large enough. If, when the circle is completed, the other hand be brought into play, the circle in the reverse direction can be described, thus forming a figure eight. Of course, it will be more difficult to scull with only one hand and this should not be attempted until some proficiency has been gained with the ordinary method.

SLOOP, AND SHIP

These are two most difficult sculling feats, and the ship is much more severe than the sloop.

For this latter you must float on your back in the ordinary fashion, but with hands sculling by the sides.



Sloop

Then one leg is erected into the air—like the single mast of a sloop. The body is propelled along while the leg remains steady. As you progress head-first you will find a strong downward pressure must be made by your hands in order that the leg which is out of the water does not sink the body.

In the still more difficult form of this feat both legs are erected in the air, at right-angles to the surface—to resemble a double-masted ship.

Very few swimmers are able to perform this latter feat, and extraordinary strong and continuous sculling action is necessary for it.

SCULLING SPIRALS

The body should slant from the surface at a fairly flat angle, and should be kept quite straight throughout.

The hands are held at the sides, and from this position they make sculling movements round the body. Both hands work in the same direction—just as if one were attempting to make the water spin round one's waist.

As a result of this action the body turns round and round, at the same time gliding forward at a fair pace. The course is thus spiral. It can easily be imagined as a corkscrew progress.

There is some slight risk, at first, of giddiness being rather troublesome, but this is soon overcome.

If the hands are kept close to the sides this feat is very puzzling to the observer.

UNDER-WATER SWIMMING

A little-used method of under-water swimming is with face upwards. This can be performed in a number of ways.

At the outset it should be understood that there are certain risks attached to under-water swimming. The danger is that one may stay under too long, when unconsciousness may come on, or serious injury to the heart result. This risk, however, is only encountered when swimmers endeavour to stay down as long as possible. To stay beneath the water for a comfortable, unstrained period is perfectly harmless. The ability to swim downwards is, in fact, often of extreme usefulness in life-saving emergencies.

To swim face-upwards you must sink the middle of your body, and reduce the chest by hunching the shoulders together and upwards. You may then swim beneath the surface, using an ordinary leg-flutter. Or the back-stroke frog-kick may be used, the body being kept down to its required depth by upward sculling actions of the hands, which should lie near the sides.

The full back-stroke, described in an earlier section of this book as the underarm back-stroke, may also be used for under-water swimming. In this style it would be necessary for the arms to give some upward pressure during their sweep round.

If you desire to swim beneath the water face downwards an almost normal breast-stroke can be adopted, its only change being the upward tendency of the arm-stroke.

PADDLE STEAMER

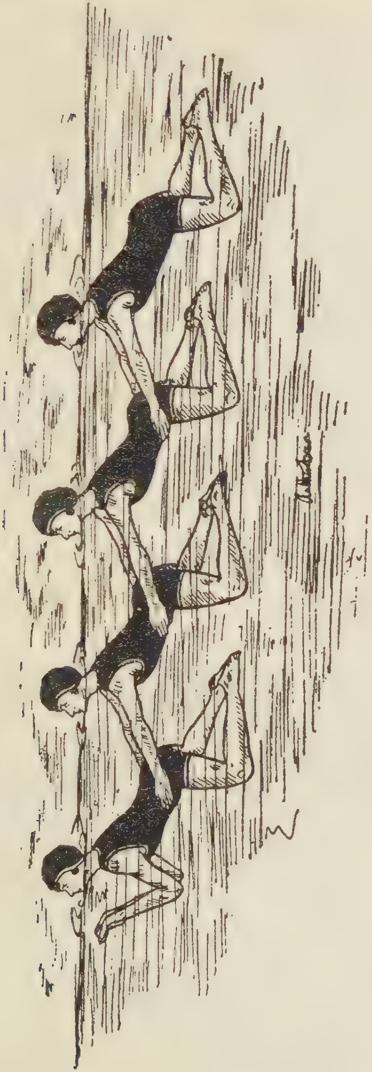
This is an easy feat of back-swimming, and one which is excellent for the leg muscles.

The arms may be folded across the chest ; held at the sides, or clasped beneath the back. The legs work alternately, the thighs and knees being held together and making no movement.

Each leg in turn is allowed to drop, gently, until the foot, pointed in line with the shin, is about twelve inches beneath the surface. The leg is then kicked upward with utmost force so that it flings out of the water, making a tremendous splash.

As there always is one leg in the air there is a continuous whirl of spray.

If the legs are used with proper energy the body is driven along, head-first, at a considerable speed—though the action is so tiring that the pace cannot be held for long.



Crocodile. *(See page 152)*

DIPPING AND RISING

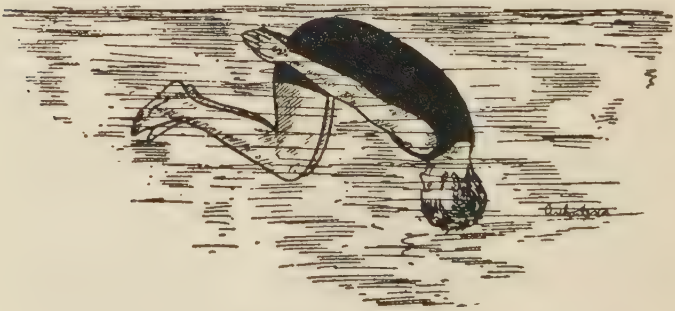
You may begin this from a perpendicular-floating or a treading-water position. The hands should start from the sides of the body. With palms outwards, the hands are carried upwards—arms must be straight and legs motionless. This movement will make the body glide downwards, and by the time the hands meet above the head a depth of perhaps twelve or fifteen feet will have been reached by the feet. The palms are next turned outwards and a reverse movement made—the arms being carried down again to the sides. This should result in the body rising almost to its former position—it may be assisted right up by a frog-kick.

This dipping and rising is an ideal exercise for acquiring ease beneath the water, a most necessary thing for an all-round swimmer.

Exhalations can be effected beneath the water.

SOMERSAULTS

Forward somersaults in the water are the easier, and should be tried first.



Forward Somersault

Having spread the arms out to the sides, in line with the shoulders, draw the knees up underneath the chin.

Now take a good breath and drop the head forward into the water until the chin touches the chest. If the arms now perform a big, circular scoop to the front, and upwards, then the body will pitch forward and go right over as if spinning on the arms, until the head emerges once more.

When performing the back somersault the body is held on the surface in the same position as for the forward somersault.

The arm stroke will now be back and upward, hands finishing with their palms upwards. The body will thus, when the head is thrown back and the knees drawn forward towards the chin, tilt over backwards.

The chief difficulty in either a forward or backward somersault is that of getting the same power in each of the arm strokes. Should one arm work more strongly than the other the body will topple sideways.

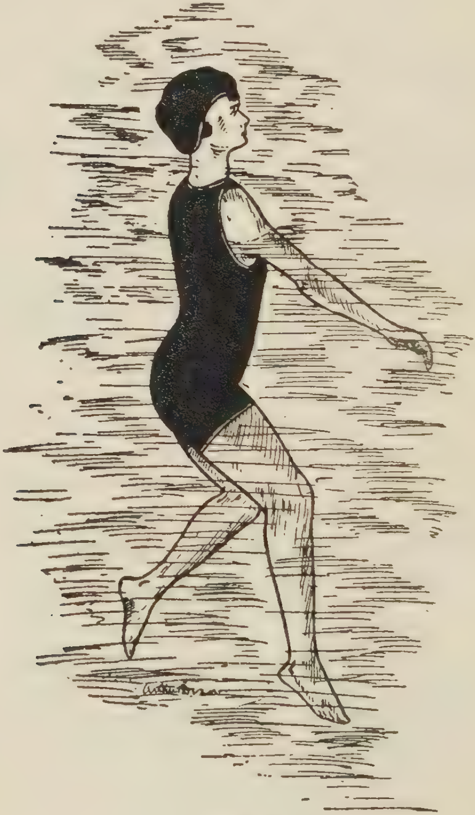
When some skill has been gained a series of consecutive somersaults may be made—four or six turns. This is not easy to do with neatness, but the chief trouble will be the holding of one's breath for long enough time for two or three turns, or the snatching of a new breath each time that the head breaks above the surface. In this latter style, exhalations will be made beneath the water.

BICYCLE

Lie on the side, at the surface of the water, with one hand down, supporting the shoulder by sculling movements—it must always be the lower arm that sculls. The other hand should be held in front of the body, as if grasping the handlebar of a bicycle.

The legs make similar motions to those of actual cycling. Forward motions are performed gently, and backwards vigorously. The result will be that the body will go round and round as if one were pedalling a bicycle—the lower arm acting as a sort of pivot.

It is essential in this feat that the body be quite horizontal. The lower side of the head should be in the water, and the feet should be only a few inches beneath the surface.



Bicycle

When the upper hand is held on the hip this feat is often called the "Water-Wheel".

FIGURE EIGHTS

A very simple but pleasing feat is the performance of figure eights whilst swimming on the back. The arms will not be used, but can be stretched beyond the head or held in any of the other positions.

Only one leg will be used, and this will work in ordinary frog-kick fashion, with moderate gliding-pauses.

The circles will be large or small according as the body and arms are kept straight or curved.

As soon as a circle has been completed by one leg, that leg will remain still, whilst its companion works in describing the second circle in the reverse direction.

TORPEDO

This feat resembles the propeller, except that now the whole body, but the feet, remains beneath the surface. The arms are held just as in the propeller, but the sculling thrusts are made with a strong upward tendency—this will result in the trunk being horizontal but about a foot beneath the surface.

Obviously this trick can be continued only while one's breath lasts.

PENDULUM

This is an interesting feat for the accomplished floater.

From a perpendicular-floating position the body and legs are made to swing backwards and forwards with a pendulous motion.

Float in the ordinary horizontal position, with arms beyond the head.

If the arms are now separated, very gently, and brought round, still in the water, until they are at right-angles to the body, the legs and trunk will sink till they become vertical—suspended as in perpendicular-floating.

No pause, however, must be made here, but the arms must continue their sweep round until they are extended to the front, parallel with each other, and with palms downward.

A breath will have been taken meanwhile and the head raised forward and drooped over until it sinks between the arms, the face being buried in the water.

If everything has been performed deliberately, the legs will gradually drift up to the surface, behind, until the body is once more floating horizontally—this time face downwards.

The whole process must now be reversed, so that the body swings through the same phases to the original position.

This to-and-fro motion should be carried on without break, and with no apparent effort.

There should at no point be any violent movement or splash.

SUBMARINE

In this feat the body is made to rise and sink in a combination of the torpedo and the propeller.

PORPOISE

This is a most interesting and graceful feat.

You may best begin it by swimming along on your breast. When your legs are straight and together allow them to remain so. You will complete the ordinary arm stroke, but this time, instead of letting the arms pause when they are in line with each other, you must carry them on so that their sweep round is lengthened into a complete semi-circle, and they reach the sides of the body. During this movement the head should be depressed beneath the surface and the body slightly bent—somewhat in the fashion of a surface-dive.

The conclusion of the arm stroke will now cause the body to tilt over, as on a pivot, and the legs to protrude for a moment in the air, as you glide downward. This movement will be like a very shallow surface-dive, with the arms at the sides ; the legs will remain together and the feet be pointed.

When you are right beneath the water the head may be thrown up and the hands pushed upward, too. A couple of breast-stroke kicks will send you gliding to the top, where your head will reappear and you will have ample time for a breath.

The arms will immediately begin their next sweep round and the plunge will be repeated.

This frequent plunging and rising can make a fair imitation of the gambols of a porpoise.

SPINNING TOP

This feat is often called the "Washing Tub"—because the body performs it in a volume of water scarcely greater than that held by a large tub.

Lying on your back, cross your legs, and draw up your knees, sinking the middle of your body, until you are doubled up into a sitting position. The knees should be held widely apart, and they, with the face and toes only, should appear above the surface.

The head should be held right back so that the chin is its highest point.

A strong sculling motion is made, near to the body, and with the hands about six inches beneath the water. Both arms work in the same direction, as if they were endeavouring to make the water circle round the body.

If the action is vigorous, and the body is closely hunched, a very fast spin can be achieved.

BACKWARD BREAST-STROKE

This method of swimming can only be performed over a short distance, and is of no general utility.

The normal breast-stroke position of the body is maintained, the legs keeping themselves on the surface by a gentle fluttering action. The hands make sculling thrusts, forward, away from the chin, thus driving the body backwards.

Swimming Tests

THE swimmer who is anxious to prove his ability can do no better than pass some test of the Royal Life-Saving Society.

The Awards of the Society, in order of precedence, are as follows :

1. The Diploma.
2. The Award of Merit.
3. Hon. Instructor's Certificate.
4. The Teacher's Certificate.
5. Bronze Medallion.
6. Proficiency Certificate.
7. Elementary Certificate.

The requirements for the Proficiency Certificate include :

"A. The rescue and Release Drills on Land.

B. The Schäfer method of resuscitation and the promotion of warmth and circulation.

C. Each candidate shall perform four methods of rescue and three of release in the water. A candidate may take either the third or fifth method of rescue. The other three are compulsory. The drowning subject in the rescue method must be carried at least ten yards.

D. Every candidate must swim one hundred yards breast-stroke, and fifty yards back-stroke, the latter without use of hands ; also dive to a depth of not less than five feet from the surface of the water, and bring up a weighted object of a minimum of two or a maximum of five pounds."

Another very popular test is that for the Silver Medal (The Award of Merit). This denotes a very high standard of all-round swimming ability and is eagerly sought after by expert swimmers in all parts of the world.

The regulations are as follows :

"Candidates, who must be members of the R.L.S.S., shall present themselves for examination attired as follows :—*Males*—Swimming costume or drawers, shirt, tie, collar, waistcoat, serge or flannel trousers, and socks. *Females*—Swimming costume, corsets or woollen spencer, stockings, knickers, serge or flannel skirt, and blouse. The attire shall be of an ordinary character and properly fastened on the body.

"The examination shall consist of the six following tests, which must be performed in a meritorious manner :

(*a*) To carry a person attired in bathing costume, by the second method of rescue, a distance of at least 20 yards.

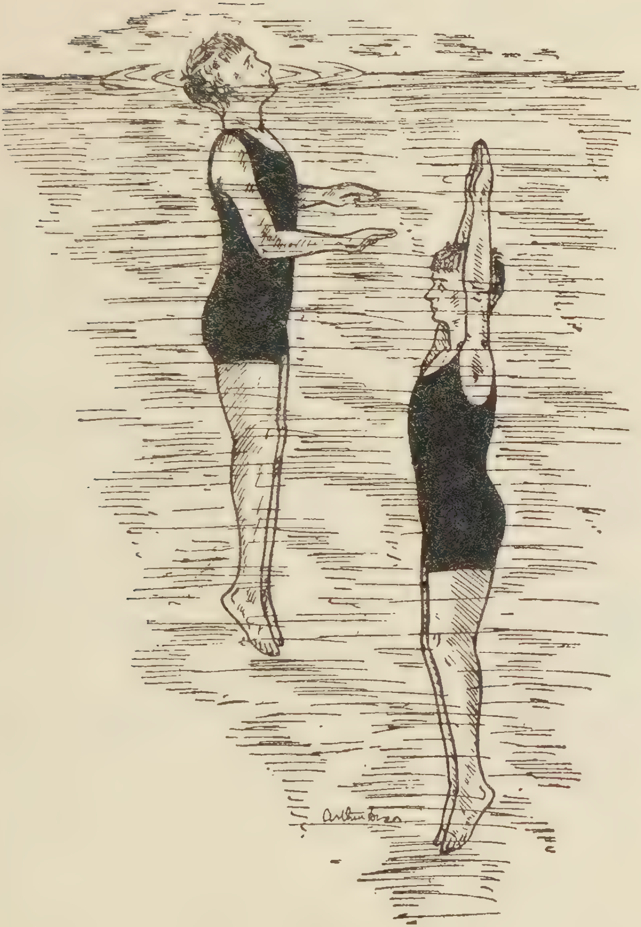
(*b*) To swim continuously a distance of 600 yards by three different strokes, viz. : (1) 200 yards breast-stroke ; (2) 200 yards back-stroke, using arms and legs ; (3) 200 yards, either by the side-stroke, overarm stroke, the "Trudgen" crawl or double overarm stroke, or on the back without use of arms.

(*c*) To undress on the surface of the water.

(*d*) To dive from the surface of the water to a depth of at least 5 feet, raise and land an object weighing about 5 lbs.

(*e*) To dive neatly from two heights : (1) not exceeding 5 feet ; (2) 8 to 10 feet.

(*f*) To perform any three of the following movements : (1) Motionless floating for 30 seconds, not necessarily horizontally ; (2) Plunging not less than 35 feet ; (3) Sculling, feet-first, using hands only, not less than 30 feet ; (4) Sculling head-first, using hands only, not less than 30



Diver. (*See page* 158)

> feet ; (5) Propeller, not less than 30 feet ; (6) Torpedo, distance 20 feet ; (7) Two consecutive backward somersaults ; (8) Two consecutive forward somersaults ; (9) Revolving on the surface of the water without the use of hands or feet ; (10) Swimming on the breast, feet-first ; (11) Marching, on the surface of the water, using legs only ; (12) Imitation of porpoise swimming—pushing off from the bottom not permitted ; (13) Imitation of submarine, sinking and rising twice ; (14) Pendulum floating ; (15) The spinning top ; (16) Water wheel ; (17) Any other scientific or fancy swimming movement previously submitted to and approved by the Executive.

"Candidates have the option of not more than one minute's rest between each of the six tests, which shall be performed in the order stated. Tests (*d*) to (*f*) should be performed in swimming costume or drawers, as may be directed by the Examiner prior to the commencement.

"A maximum of 10 points shall be allowed for each swimming stroke, dive, and movement. A candidate failing to obtain five points shall be deemed to have failed, and cannot be re-examined except by the approval of the Executive, and if re-examined, the whole test in the order stated must be again performed."

The holder of any of the awards is entitled to wear the badge of the Society, and, with the silver medal, a special costume badge is awarded.

Swimming in Two Days

THERE are many people who would be most glad to swim, but who have no opportunity of learning except during the week or two of the summer holidays. They try desperately hard to master the complicated breast-stroke during the few available days, but without any success—in fact, the only result is that what should be delightful exhilarating bathes are, instead, painful and discouraging.

All this need not be. The mistake is in attempting to learn a comparatively difficult form of swimming. Breast-stroke cannot be mastered in two or three days, usually. A person with so brief a time at his or her disposal should set about some simpler form of swimming.

In another section of this book is described the short-arm back-stroke. This most simple style can be learned on about the second day by an average keen bather. The corresponding land drill should first be practised, and then the confidence work dealt with at the beginning of the book.

With ordinary care and perseverance success may be safely anticipated and the holiday bather will, for the remainder of his seaside stay, have the immense satisfaction of being able to swim at least in some degree.

I am referring, of course, only to sea bathers ; to learn even this simple stroke in fresh water will be rather a more arduous task. And, except in unavoidable circumstances where time is severely limited, it is better to begin swimming along more orthodox lines.

A Course of Swimming

ANYONE can become a moderate swimmer, with some all-round ability, in a single season, if practise be intelligently arranged. When you remember that may people, even after two or three years' regular bathing, are able to do nothing besides breast-stroke, it is clearly desirable that your bathing should be systematically planned. In this "course" I give details of twelve weeks' studies with which anyone may keep pace, providing bathing be regular and no time be wasted.

Daily practise should be fairly evenly divided between the various things described: though any details that are specially troublesome should naturally get particular attention. For complete directions refer to the various sections of this book.

FIRST WEEK

Practise the "confidence drill"—jumping into the water, dipping your head, and generally training yourself to feel quite at home in the water—according to the instructions given at the beginning of this book.

Your one other piece of water-work for this week will be attempts at floating.

Breast-stroke land drill.

SECOND WEEK

The breast-stroke may now be tried in the water, either with a friend, or without. Towards the end of the week you should be able to manage just a few strokes with arms and legs combined.

You may also begin the simplest form of back-swimming—the leg-flutter. Do not be disappointed if you do not master this in one week, its chief immediate value is to teach you the correct position necessary for all back-swimming.

This week, instead of jumping into the water, you should tumble in from the steps, and so get some preliminary diving practice.

THIRD WEEK

Further improvement of your breast-stroke will be the chief item for this week. See that your breathing is properly performed, and look more to the details of every movement.

To the leg fluttering of last week you will add the use of the hands. If you have any nervousness you may remain in water of two feet deep, but four feet will be better. The arm action will consist of the short paddling movement described in the early part of the "Back-Swimming" pages.

The preliminary tumbles into the water may now be developed into proper dives.

Practise the first two forms of back-stroke land drill.

FOURTH WEEK

Still improve your breast-stroke this week by putting more power into every action, so that you progress by fewer strokes. It is a good plan to count the number of arm movements which you make over a fixed distance—and each day that number should be decreased.

Proper back-swimming must now be tried. The frog-kick should be used, and the hands kept on the hips.

FIFTH WEEK

Aim at swimming each day a longer distance by means of breast-stroke. You can have small reason to be satisfied with yourself until you can cover half a mile with ease.

To last week's back-stroke the arm action mentioned for the "Third Week" may now be added.

Take long swims also by this back-stroke.

SIXTH WEEK

Continue to swim at least one long stretch each day by breast-stroke, paying special attention to accurate detail and good style.

The overarm back-stroke should now be started.

Surface-diving can also be learned; and side-stroke land drill.

SEVENTH WEEK

This week you must become familiar with the action of the side-stroke, in the water.

Surface-diving for objects at varying depths from six to nine feet should be assiduously practised.

EIGHTH WEEK

Side-stroke must be the chief study; the scissors kick should be improved by being practised separately—while you hold on to some steps or the bank, keeping your body, on its side, horizontally.

"Marching on the Water" can now form the first fancy swimming feat.

NINTH WEEK

This week you must practise combination of arms and legs in side-stroke—having the assistance of a friend at first, if you so desire.

The remainder of your time should be spent in swimming long distances by the overarm back-stroke.

TENTH WEEK

Now you should manage side-stroke without any assistance.

It is time for horizontal floating to be learnt. You need much practise for this.

The feat called "Dipping and Rising" may be tried.

ELEVENTH WEEK

Most of your time must go to the side-stroke swimming.

Leg-fluttering, while the arms are held at the side, should be practised.

Diving from heights up to five feet should be tried daily.

TWELFTH WEEK

Side-stroke swimming is to be continued, with particular attention to details.

The "Spinning Top" should be practised.

Swim half a mile by each of back- and breast-strokes.

From this time you may begin to prepare for the first test of the Royal Life-Saving Society.

Finally

NEVER rest satisfied; there is always more to be learned. If you are good at long distances—can you sprint? If your polo passes are flawless—could your swallow dive be improved? If your "canoe" is perfect—are you at home in a rough sea?

And see that you spread your enthusiasm to others!

And so, if you never have learned the way
To gain all this joy, well, do not stay
Until from your heart you can joyfully say—
'Tis glorious to be a swimmer!

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